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For the Farmer and Planter.
An Essay on Pisciculture.

BY THOS. W. WOODWARD.

To the President and Members

of the State Agricultural Society:

GENTS—Believing the subject of Pisciculture to be one in which there is considerable interest manifested, and regarding it as intimately allied to agriculture I have prevailed upon myself (although unaccustomed to handling the grey goosequill) to intrude upon you the following report on the above mentioned subject; offering, moreover, as a plea, an honest desire to be reckoned among those who are at all times willing and anxious to contribute "a mite" for the good of our citizens and to public enterprise generally. Nor shall I—as has been the case with most writers on this

subject—enter into detail upon the fish ponds and discoveries of either Rome, China or France, as I suppose the public are posted ere this. I refer all, however, who happen not to be, to a meritorious little work on artificial fish breeding, edited by W. H. Fry, in which will be found a very interesting and instructive account of the discoveries and experiments of the two illustrious French fishermen, Gehin and Remy; and so I have also seen a work of some merit, entitled "Fish Culture," by Dr. Garlick, of Cleveland, Ohio. Both of these works are, however, of really little service to us of South Carolina, as they treat of fishes but little known or suited to the waters of the South. I would, nevertheless, recommend a careful perusal of Dr. Garlick's work, as it treats of American fishes, and in a more Northern latitude, is, unquestionably, a valuable acquisition.

I constructed the first fish pond in Fairfield (so far as my knowledge extends), early in the spring of '54. This pond, although small, served to convince me of the fact that, a fish pond properly constructed and judiciously managed, could be made a source of some profit, to say nothing of the pleasure and instruction to be derived from it. This pond was made by throwing a dirt dam across a small clear spring branch, and was capable of holding a head of water about 15 yards wide, 4½ feet in depth, and backing 50 yards, more or less. My dam being finished, I immediately proceeded to stock it; and not knowing what varieties were most suitable (never having seen a fish pond), I placed, indiscriminately, every thing in the shape of a fish, that I was able to lay my hand

on—such as Cats, “Stonetaters,” Red Belled Perch and Suckers—all very small, being caught in the same branch on which I built my dam, from one-half to one mile below. I also procured from a mill pond in the neighborhood, six Mormouth Perch, 13 or 14 Silvers, and one Eel. These, with my branch fry (like unfortunate “JOHN BARLEYCORN”), were heaved in there to “sink or swim.” I did not observe any thing worthy of notice until about the last of May, when I discovered that the *Red Bellies* were constructing their nests or beds in the shallows around the pond; the Silvers had already gone through the process, and I found swarms of their young floating near the surface. I was unable to see either the Mormouth, their beds or their young, and consequently was in doubt as to whether they had had an *increase* or not. It was not until the latter part of August that I was able to gratify my curiosity at the expense of my dam, which was carried away in that month by a freshet. I at first supposed that I had lost all my fish, but upon examination found that quite a supply remained in a hole above the dam. These were taken and the following observation made, viz.: That the Silvers had increased most, the *Mormouth* next, and then the *Red Bellies* and *Cats*. I was unable to find any young “*Stonetaters*,” and did not see any young Suckers (although the *Suckers* have bedded since.)

The number of fish remaining, was estimated by Dr. McCants (a neighbor), and myself, as follows: Of Silvers, several thousand; and of Mormouths, five or six hundred (the *increase* of six fish). Those fish were of course small, and we had to approximate by guessing, although we were satisfied that we did not overshoot. This being so much better than I anticipated, I immediately re-built my dam, and determined to operate on a *little grander scale* in the following spring, which I did, building a dam which now covers about half an acre of land, with water varying from six feet to as many inches in depth. This pond was built on the same stream, about one hundred yards below the one spoken of first. Having had ocular demonstration of the uncertainty of human affairs, I determined to ditch around my ponds. This I accomplished by taking my ditching compass such a distance above my ponds, that I was enabled to run a ditch (commencing in the hollow) down the branch, conveying the water that ordinarily went down the hollow and into my pond, around, and at the same time catching the wash from the hills. I would here impress the im-

portance of this security against the muddy washing of the hills, by assuring you that I believe it highly improbable that any one can succeed, who neglects this matter. If the mud and freshets from the hills be not guarded against, you not only run the risk of losing your dam, fish and all, but also your dam, if not broken, will be filled up with mud and sand; moreover, I have demonstrated satisfactorily that Trout, Bream and other of our finest fishes, cannot thrive in any other than a pure, clear pond. My advice to any one desirous of building a dam, would be, first to select an advantageous situation on some clear branch, fed by at least one pure, never-failing spring, as near the head of the hollow as convenient, in order that the ditching might be as short as possible. And if it be convenient, first to construct the ditches and let them be tested by a heavy freshet—after this the dam should be built. I prefer dirt dams to any other, as they are more durable, and if the water be kept from running over, there is little or no danger of breaking. I would also say that I prefer a dammed pond to a dug out one. I have tried both—the former cost less, and having natural banks and bottom, is better suited to the habits of fish; the latter will do well, however. As has been proved by Maj. Lyles, who has bestowed great care and attention on the subject, and who is succeeding very well with a pond 70 feet by 30 or 40, dug out and dammed around a spring. There are now several ponds in the district, all of which seem to give great satisfaction and delight to their owners. The dam being finished, and provided with a waste-way, and the mouth of this guarded with a wire seive to prevent the escape of the fry down the branch, the next care should be to stock it with the most suitable fishes. This brings us to still another very important point. Without pretending to know the *most suitable*, I will detail my observation and experiments with several varieties common to our State, and which answer well in the absence of better. I believe the time is not far distant, however, when it will be quite a common affair for our farmers to stock their ponds with the eggs or fry of the choicest varieties of American and European fishes. Highest in my estimation stands the *Trout*, well known over the State, and quite a common fish in all the lower districts. This fish I shall call the *Carolina Trout*, to distinguish it from the *Trout* of Dr. Garlick and other writers, as it is entirely a different fish, being properly a *Bass*, (Backman,) whilst the fish of Dr. Garlick belongs to the genus *Salmo*.—

The Carolina Trout is an exceedingly voracious fish, feeding upon the smaller fishes of almost every variety, and its own young among the rest; but from its rapid growth and the excellence of its flesh, as well as for its *biting qualities*, I unhesitatingly place it at the head of the list of fishes that have come under my observation. This fish should be placed in a pond the larger, the better; the pond having been previously well-stocked with several varieties of small fishes, being particular not to leave out the *Silver* fish. My observations with this fish were as follows: In the month of May, 1856, I procured some hundreds of the fry of this fish, the largest of which were about one and a half ($1\frac{1}{2}$) inches long, caught from a pond owned by Capt. Houser, of St. Matthews Parish, and carried up on Rail Road, in a barrel of water. I was told by the *knowing* ones, that these fish would not breed until they were 2 years old, and I tried to transport larger fish, but failed, the large fish dying in a very short time after being taken from the water. These fry having been deposited nearly all safe and sound in my pond, I soon discovered that they were "perfectly at home," and in a few days I noticed them making *furious charges* on the droves of little Silvers, with which the pond was literally thick. It is astonishing to observe the cunning displayed by these little creatures whilst in pursuit of their fry, and at how early an age we see unmistakable evidence of what the grown fish will be. I watched the growth of these fish particularly, and found that they exceeded my most sanguine anticipations. In the month of May, 1857, (at which time the fish were just one year old,) I had specimens of them that exceeded 8 inches in length. This fish is beautifully adapted to the purposes of *artificial breeding*, as it seeks shallow water for the purpose of depositing its eggs, and may be easily caught with properly constructed nets. I have not tried artificial impregnation with it, however, from the fact that I believed (it was the common opinion) that it would not propagate until it had obtained the age of 2 years; consequently, when (to my astonishment I found that it was constructing its nests in May last,) I was unprovided with any kind of net wherewith to capture them. Nor do I regard artificial propagation as really of much advantage in the successful rearing of this fish, as the eggs can be procured (naturally impregnated) from the beds with but little difficulty, and quantities of the fry may be seen floating over or near the beds.—These fry are easily recognised by the black

stripe extending from head to tail on each side of the body, and can be dipped up and transferred to a small pond or tank, where they should be kept until they have attained size and action sufficient to enable them to elude the cannibal jaws of their voracious parents. I distributed among my friends (who had constructed ponds) upwards of 150 of these fish, dipped up with a common tin pan (used for holding milk), the majority of which are doing finely. This fish, although feeding on the small fish of almost every species, seems, nevertheless, to pursue the Silver fish more eagerly than any other; in fact, I believe that this vexatious little fish was created especially for the Trout to prey upon. And although it robs the beds of almost every fish (not excepting the Trout), I regard them as indispensable in a pond, for they are unquestionably the most prolific of any of the fresh water fish with which I am acquainted; hence they may be considered a never-failing source of food for other fishes. I have prepared a tolerable fair specimen of "*sardines*" from these little fishes, but I regard them as solely valuable as a food for the large fish. The Carolina Trout can be made to weigh from $2\frac{1}{2}$ to 10 or 12 lbs. in our own State, and I saw one in Florida which was said to weigh 18 pounds. I doubt the policy, however, of making them exceed two or three lbs. in a pond; they are large enough for any purpose at this weight, and if kept longer, might become expensive.

My experience places the Mormouth Perch next to the Trout. This fish is too well known to need a description here; it is one of our most hardy fishes, and preferring sluggish water to running, is thus by nature peculiarly adapted to the ponds. This fish, like the Trout, is a bold biter, and furnishes delightful sport to the angler; it may be caught with either the minnow, worm, a piece of raw meat, or almost any thing else in the shape of *eatables*. It is endowed with great rapidity of growth and very high powers of reproduction. My first start in the culture of this fish, was made with 6 fishes (as has been said before), and I now reckon them by the thousand. This fish beds in the early part of the spring, with me, and repair to shallow water for the purpose, where their movements may be watched from a distance of 1 yard or even less (as they are very tame at this particular time), and are with difficulty kept from their beds, swimming back almost immediately after being driven away. I have caught individuals of this species (whilst guarding their eggs) three different times, and

after being thrown back each time, they would swim immediately back to their beds as though nothing had happened. The Mormouth, in bedding, selects a retired spot, surrounded by grass or bushes, where it works out, with its tail, a small basin, wherein it deposits, preferring to have small roots in the bed, to which the eggs stick. I have frequently taken up a small stick or root perfectly stuck with the small white eggs of this fish; these eggs I have taken home and hatched in glass vessels of water, in from 4 to 6 or 8 days. I have kept more than 1000 of the fry of these fishes, in a glass box 18 inches by 9, for more than one week, which had been hatched from eggs procured in this way from the beds. I have specimens of this fish, weighing from 9 to 12 ounces, and I am satisfied that they will, under proper management, grow still larger as they grow older. I would advise that the eggs be procured from the beds, naturally impregnated, and that they be placed in tanks or small ponds, and there hatched and fed until they are of size and age sufficient to be trusted in the large pond with the "big fish." It is also necessary for the rapid growth of this fish, that it be supplied with smaller fishes for food, and none answer better than the *Silver fish*. The Mormouth (unlike the Trout) can be transferred to a considerable distance, and of any size, by not overcrowding the vessel, and by renewing the water occasionally.

Next, in my estimation, stands the Red Belled Perch. It is the most interesting of all the fishes that have come under my observation, and is one of the most beautiful of the finny tribe; while, at the same time, from its peculiar habit of selecting very shallow and sandy bottoms for the purpose of bedding, its habits can be better studied than the habits of almost any other fish. I have bestowed great attention upon the study of the peculiarities of this fish. And did I not think that a fish pond would pay *gastronomically*, I could not be induced to deprive myself of the pleasure and pastime derived from one well-stocked with this fish. About the first of June, they commence the operation of bedding, as follows: The male selects a suitable location for the bed, preferring not more than a foot of water with a sandy bottom, entirely free from sticks or trash of any kind. The bed is then constructed thus: The fish having placed himself immediately over the chosen spot, it places its tail fin near the bottom, and standing nearly erect, its tail is violently put in motion in the same manner as when swimming very fast; the propelling

tendency of the tail fin is resisted by the backward movement of the pectoral and other fins. And hence the fish standing still, a current is produced by the tail, which stirs up and floats out all the mud or dirt, leaving nothing but pure, coarse sand. It is astonishing how beautifully the beds are made, and how particular the fish is to carry out the least particle of foreign matter that may get into it. The bed is frequently one yard in diameter. But a few days elapse ere the bed is finished, and then commences the depositing or laying. And I will here state that I am satisfied that one male occupies each bed during the entire season of bedding; and that different females approach the same beds for the purpose of depositing; and that each female deposits several times during one season, for they have (for the last 2 years) bedded incessantly from about the first of June to the last of August. The process of bedding proceeds thus: The female, heavy with eggs, swims into the bed where the male is always stationed, and he having placed himself by her side, they swim around the bed together—she depositing eggs and he the milt. As soon as the programme has been gone through with, the female swims back to deep water, leaving the male to guard the nest and eggs, which he does, darting furiously at any fish that dares to approach; and I have had them to strike my hand whilst I was in the act of removing eggs from their beds. The eggs of this fish, in the process of hatching (with the aid of the Microscope), illustrate, most beautifully, some of the leading facts of embryology, and for some time before and after the fish leaves the outer cuticle or shell, the blood can be distinctly seen in its passage to and from (the heart), demonstrating most conclusively the circulation of fishes, as well as of other animals. These eggs can be procured in any quantity and transported to a considerable distance. They hatch in from 6 to 8 days.

In addition to the above, there are several other fishes that are well adapted to the purposes of the pond, and I have no doubt but that the Bream is as much so as any other. They are an exceedingly tender fish, however, and require very pure, fresh water to thrive in.—My experience with it is very limited, from the fact that I was unable to transport any of them alive—they almost invariably died on the way, and in one instance after they were placed in my pond. I have, however, placed the eggs (taken from beds in St. Matthews) in my pond, and I have no doubt but that they hatched. I expect to get up some as soon as the weather

gets colder, and I have no doubt but that I shall succeed admirably with them. They bed in still water, but are much more shy than any other of the perch family. I might pursue the subject further, but not wishing to put your patience to the test, I shall lay aside my goosequill for the present. Wishing that each member of our Society, from our excellent President down to the most humble signature upon our list, may yet enjoy 1000 years of well-spent life, I am respectfully,

Your most obd't serv't,

THOS. W. WOODWARD.

P. S.—I neglected to state my manner of feeding, which is as follows: During the spring and summer my fish are fed with all the chickens (large or small), ducks or turkies, that die in the poultry-yard. They are picked and chopped up fine by the little negroes, who are encouraged to be always on the lookout. The liver of any animal, boiled and run through a small sausage cutter, is a most excellent food for the fry (and so is the flesh also). Most fishes are very fond of bread—either wheat or corn—hominy, or even raw meal; in fact, it is difficult to find anything that may not be turned to account in this way. I have used one of "Gilbert's Patent Fly Traps," to some advantage, as almost all fishes are very fond of anything in the shape of a fly.

T. W. W.

For the Farmer and Planter.
Reports---Inquiry, &c.

MR. EDITOR:—The January number of the "Farmer and Planter" for 1858, was received yesterday. I am much gratified to see in it the reports of Col. Marshall and Mr. McAfee, and also the report of Dr. Parker in the previous number. The publication of these reports is an advance in the right direction, and encourages the hope of the increasing usefulness of our Society.

I am much obliged to those gentlemen for the information those reports contain, but there is other facts about which I would like to have been informed. Was Col. Marshall's up-land or bottom? Was it fresh land or old—in other words, how long had it been in cultivation? What crop grew on it the previous season? Was it hill side or level, and if hill-side, what was its exposure? What was the amount of the previous crop, or had the land rested? Why does the Col. attach so much importance to leveling the land in securing a stand? Was it to secure a more evenly distribution of the seed when thrown from the hand

broadcast, than could be had when sowed on the uneven surface of corn ridges, or was it for some other reason he desired the land level? I believe the fact is generally established that cotton seed are good manure for wheat, but to approximate their exact value in the Col.'s case, requires much fuller information than he has given—at least that is the way I understand it. I confess that I feel myself neither instructed in theory or practice by the Col.'s report. Let me be not misunderstood, I mean not to find fault with Col. Marshall's report, but simply to indicate the propriety and policy of the competitors before our Society, giving more time and thought to the preparation of their reports, so that they may be more instructive, and in a higher degree promote improvement in the agriculture of the State.

Mr. McAfee's corn crop was very fine indeed, but I do not perceive any particular merit on his part from reading the report. That bottom land on "Little Sandy River, in Chester District," is capital, and he is fortunate in having it. But I do not care so much to hear of the good fortune of others, as to be instructed to improve my own condition. If Mr. McAfee had brought in a report of 20 or 30 bushels to the acre, produced on poor or wornout land, by some system, practice or method, by the pursuit of which I should be able to make my corn, even a few cents on the bushel, cheaper than I now can, he would have achieved much more for the agricultural prosperity of the State, than he has.

I still insist that the instructive character of the reports of competitors, should have its due weight in securing the awards; and that premiums should not be awarded to the fortunate, rather than the meritorious.

Dr. Parker's report on corn, in your November number, was much more satisfactory. It contained an important and practical lesson on *draining, manuring and deep plowing*, that is worthy the consideration and study of every man who lives by tilling the soil.

I am sorry to see by your January number, that I have troubled our friend "Hotch Potch," again. I have written to but little purpose, if your readers generally misunderstand me as much as he does. I was aware that my views on the subjects of which I have been treating, were a head of the common public mind, but I did not suppose that I was so far in advance as to be *out of sight* of men of his intelligence.—The failure of the hog shows at Columbia the two last years, is a very strong argument against the present system. My plan *may* prove a failure, but the present plan *has* failed.

I hope in the succeeding numbers of your paper, to see more reports from the State Society. When we have once learned to report and publish, we shall soon be able to improve our reports and make them *instructive* and satisfactory. I am particularly anxious to see reports on Devons and Brahmins, to convince me that they can be made more profitable for milk, beef hides or work, than the *Pineywoods* Cows on the one hand, or the mountain scrubs, on the other. I have as yet seen no evidence of the superior profitableness of either, except articles of sale to *fancy breeders*.

Most respectfully,

RIGMAROLE.

Potts Cove, Jan. 1st, 1858.

For the Farmer and Planter.
Debut of a new Recruit.

MR. EDITOR:—A friend told me this evening that he would send me the "Farmer and Planter" for this year. All right—you have a subscriber "during the war." I bid God-speed to every enterprise which has for its object, the elevation of our common calling, and the renovation of Southern soils. Let us all co-operate together, that a flood of light may be shed over the rural districts of the South, and the desert reclaimed from its barrenness, and "blossom as the rose."

But, sir, let me say here, that it may not be forgotten that the gentleman who proposes to send me your journal, is now the editor of an agricultural paper. I mention this fact, as it affords me an opportunity to applaud such a course, and to express my gratification, that the editor of our *State* journal, (agricultural) is not working for self merely, but for the great cause of agriculture every where. It shows that he wants the light to flash from every quarter, and that he labors with full purpose of heart with his brethren of the editorial corps to bring about the agricultural solution of the "land of flowers." Let this course be imitated by all the conductors of Southern rural magazines, and the cause for which we labor, in less than ten years from to-night, will occupy a stand-point that will astonish old feggyism, and bless the land.

I now call, most earnestly, upon the subscribers of the "Farmer and Planter," to subscribe for the "Planter and Mechanic," edited by Dr. M. W. Phillips, and published at Jackson, Miss., by Col. J. J. Williams. I make this call, not that the subscribers of the Farmer and Planter may be less, but that the subscribers of the Planter and Mechanic may be more. And I

hope that every subscriber of the Miss. paper may take the South Carolina paper, and vice versa. It would be to the interest of every planter to take three or four papers, devoted to his interest, in different sections of the country.

Yours, &c.,

G. D. HARMON.

A Day at the Crystal Palace.

"GREAT FAIR OF THE AMERICAN INSTITUTE."

One who has not, after a "weary day's work," enjoyed the luxury of a night's repose upon a patent, reaction, topsy turvy, turn over, suspension spring mattress, can form very little idea how hard it is to get one's consent to get up in the morning, or how easy it is, to do it when you make the effort. Do you hear the tinkling of the ice in the pitcher, or the gurgling of the croton as it fills up the marble basin? It is irresistible—a plunge or two into the aqua vitæ and a rubbing down with a Turkish Rubefacient and you are ready for a breakfast at St. Nicholas. Strolling down interminable stairways, you find yourself at last approaching the breakfast saloon, passing by a side table, you are accosted with, want a morning paper, sir—Herald, sir—all the late failures, Times, sir—29 more passengers of the Central America saved, and hopes entertained of Lieut. Hernon's safety, &c.

It is the *fashion* to read a newspaper at breakfast, "a l'Anglaise," and if you want to be noticed by the waiters, you must buy one—assume a sort of devil may care air—look as if breakfast was the last thing you were thinking about—lounge easily in your arm-chair, as if you were used to it, glance over the telegraphic items, stock market—exchanges, failures, &c., order a cup of café aux lait; a French roll—an omelette le segar, cotelette de la mouton and a tumbler of ice water, and you may rest assured that you have impressed the waiters with the importance of dancing attendance to you.

Breakfast over—we find ourself standing on the pavement, reading the flaunting flags flying on the tops of the omnibuses—"Scene of the shipwrecks in the Police Gazette. "Celebrated trials of criminals." Great Fair at the Crystal Palace, Grand Aquarian at Barnum's Museum," &c. An Omnibus man divining our position, threw up his hand—we involuntarily gave a nod—"right, sir," and we are seated on our way to the Crystal Palace.

There used to be an old story in our boyhood, about a discussion among the ancients, as to any improvement in man's organization. Some thought he should have a window in his breast, that you might learn his thoughts, another that he should have an eye behind, to enable him to take a retrospective view of things, &c. Well, Yankee ingenuity and practice have developed in man the latter faculty, to a wonderful degree of perfection. These Jehus drive furiously through the densely packed rows of vehicles and footman—every passenger by the wayside, count every one that come in, receive

the pay, make the change and let the passengers out without the slightest accident—they must have two eyes—or a sort of double sense, or as they are always rapping on their glass, they may be spiritual rappers. Through what magnificent piles of brick and mortar we have been driving—twenty-one years ago, this whole region was sparsely covered with private buildings—few and far between—now it is becoming the heart of the city, and business signs are spreading far, far beyond. We are at the “Crystal Palace.”

We shall not say much about the “Crystal Palace,” it has been touched by so many unskilful pencils, that we feel inclined to suppress our opinion—some have called it a failure, and nearly everybody has seen a “pickter” of it, and formed an opinion. One thing is certain—it will take a great many things to fill it, and once filled, a long time to look through the catalogue.

The first thing that strikes you on entering, is the Statuary. Busts of distinguished individuals, and ideal groups are on either side.—We are particularly struck with “The Lovers,” and the Shepherd, from the chisel of Lazzani, also a Statue of Columbus, from Staffette, and the sleeping baby “in puris naturalibus.” On the left, the celebrated group of Christ and His Apostles—these efforts always fall below our ideal, and Peter was about the only one in the group, who looked like himself. On the right was Carew’s celebrated “Alto relievo.” Taking of Christ down from the Cross—it is a most impressive scene. On the right stands Joseph, of Arimathea, supporting the feet of Christ, above him, leaning his head against the cross, is St. John, the Evangelist, near him Mary the mother of Jesus, the Samaritan boy bringing a basin of water, on the left is Nicodemus, supporting the body of Christ, as it is let down—“the mother Mary,” on the left, Mary Magdalen, is weeping, Mary, mother of James, just above her, with most sorrowful countenance. The whole piece is grand in conception, and the deep impression which it made upon our mind, satisfied us, that so far as our feelings were concerned, the Artist had divested our pen of the power of criticism.

In the picture gallery we saw nothing very remarkable, unless it was the wonderful improvements made in Photography. Hattotypes, &c. The portraits, “large as life and twice as natural,” now taken by Photography, and oil colored, are perfectly startling. What will people get at after a while? one involuntarily asks. We noticed a beautiful piece of Gobelin Tapestry, copy of a Dutch rustic scene of Tanners.

The manufacturing department was filled with all sorts of embroidery, needle-work, sewing-machines, dress-cutting machines, nick nacks and Yankee notions.

The Machine department contained every thing in the shape of Yankee inventions, from the turning out of a locomotive to the manufacture of a wooden nutmeg.

The agricultural department contained all manner of plows, harrows, seed-sowers, clod-

crushers, rollers, mowing machines, threshing machines and pick-pocket contrivances. By the way, we saw our friend, R. A. S.’s subsoil plow there, from four or five Yankee manufactories, set out as “the self-lifting subsoil plow,” superior to all others, &c.

The Pomological department contained beautiful collections of grapes grown under glass, Black, Hamburg, &c., luscious pears, peaches, nectarins, apricots, plums and apples—verily, these things did make one’s mouth water.

The horticultural department sported mammoth beets, pumpkins, squashes, tomatoes, cabbage, potatoes, yams, egg plants, &c.

Flowers.—We saw scarcely anything but dahlias—of them were several varieties, and beautiful ones to boot.

One becomes mentally as well as physically tired of gazing over the interminable variety of things on exhibition here. With this feeling we had taken a seat in one of the galleries, and were quietly watching the life current as it flowed in and out of this fanciful structure.—There is no characteristic of the American character which strikes a foreigner so forcibly as his restlessness—his impatience of restraint—emphatically “he never is, but always to be blest.” The eldorado is only a little nearer sun-down—that which is to please is in the other end of the gallery. He gulps down his drinks as if he were dying o’ thirst—he bolts his food as if it were the last morsel—he frets and fumes on the rail or steamboat, over a moments delay—he can’t cross a three minute ferry without a newspaper to make his time fly fast—he goes to the theatre, and the curtain has but just dropped upon some thrilling scene, when he thumps stick for a new scene in the drama; the waves of ocean have hardly closed upon the wreck of the Central America, when it is forgotten in the rush for the goal in the thirst for excitement. In the midst of this reverie, which had well nigh ended in sleep, we were startled by a most unearthly sound,—“Angels and ministers of grace protect us,” we almost involuntarily exclaimed: What is that? Why, said a good-natured Hibernian girl hard by, that, sir, is the Calliope, a sort of *stame* organ, sir. Shades of the gifted nine protect us! Is there no dear friend of the Muses who will institute an action for libel against this Mass. Yankee? But as old Horace said Colliope could play on any instrument, we take it some of the modern Athenians suggested the title.—We have a suggestion, and throw it out pro bono publico—and as my friend Young is an enterprising man withal, and a good President, and knows what will *draw*, we suggest that he set up a Calliope on the S. & U. R. R. locomotive, and if it don’t scare the cows so far away from the track that they never will come back again, we give up we have no ear for music. The devil, it has been said, can quote scripture admirably when it suits his purpose; and if he ever had anything to do with music, this is certainly one of his inventions, for the benefit of the “Freedom Shrickers.”—*Unionville Journal*.

There is a very striking difference between

these Northern industrial exhibitions and ours. Here you have every sort of jimcrack you can dream of—every effort of inventive genius—from the steam engine, to a quarter dollar knife cleaner. The whole exhibition is an advertising sheet—where every body who has anything new to sell or newly invented, spreads it out to the best advantage. Silver cups—big or little premiums, are not thought of; but to bring things into notice, is the plan. Here all the best specimens of agricultural implements, from all the New York houses, were on exhibition, and persons ready to speak out for them; all the varieties of seeds, from the seed stores; fruit, from nursery men; flowers, from gardeners; furniture, from the cabinet makers; finery, from the upholsterers; musical instruments, painting, photographs that were works of art; ambrotypes, and all other types; engraving, embroideries, needle-work, fancy goods, from the merchants; milliners and mantua makers saloon; candies and confectionaries; turning lathes, spoke machines, steam engines, horse powers, spinning jennies, power looms, cotton gins, corn shellers, straw cutters, and every thing you could dream of in a variety store, or spring out of the inventive brain of a Yankee notions. The agricultural idea was merged in the mechanical and artificial. It was a great show box of Yankee ingenuity. In our exhibition, every element is subservient to the agricultural, as it should be in a country almost purely agricultural.

Agricultural Education.

On our first page will be found the report on Agricultural Education, submitted at the last meeting of the State Agricultural Society.—That report we think embodies much that is worthy of calm, mature reflection. We have long ago been impressed with the belief that there is no class of men so lamentably ignorant, in what legitimately pertains to their daily avocation, as farmers. If a man has a son of some promise, he (*fortunatus puer!*) is dedicated to some one of the "learned professions," as confused, foggy conceptions of law, medicine or theology are termed; the less gifted are sent to school—perhaps to college, and, like the gentle Juan taught

"The languages, especially the dead,

The sciences—and most of all the abstruse

The arts—at least all such as could be said

To be the most remote from common use."

Now we would not be understood as objecting to a literary education for farmers. Far from it. Let the influence of a pure literature embellish and bless the rural homestead. Let the adornments of a cultivated taste and polite accomplishment, blend with morality and unsophisticated innocence of the country. Let

the fireside, after the toils of the day, be a nursery of genius, and brightened by the hues of poetry, the flow of wit and the useful love of history. We desire education in its broadest and most elevated sense—the higher the standard the better. Let all the faculties of the mind be fully developed—let the student be trained to think for himself—let him receive the polish and feel the ennobling influence of the "humanities"—let him, in short, receive all the blessings which our colleges so charitably diffuse, and after he is prepared for the reception of practical information, then let him be placed at an agricultural school and thoroughly taught the science and the *practice* of farming, the principles of economy, humanity to beast and servant, as well as the art of rural embellishment and arboreal culture. We understand and appreciate the distinction between education in its correct and restricted sense, and the mere accumulation of knowledge, and it is all-important to keep this distinction in view. It is education that develops the man, morally, intellectually and physically. It gives breadth and compass to the mind, while instruction is on the intellectual pabulum. But the former is useless without the latter. An appetite without food is a suitable emblem for a well-trained, capacious mind without some field for investigation. Law, medicine, theology, literature, are open to a few only—for a majority must be producers. Farming is, at the South, the means of producing—the basis of wealth and substantial comforts, the end to which the mass of our young men must bend their energies. This fact gives a permanent importance to an education pointing specially to this pursuit.

But it may be asked, shall an individual who intends to devote his life to turning the glebe, spend three or four years in acquiring a classical education? Yes, for this is necessary to make him a *man*—this is the drawing out, the developing of the mind to prepare him for the moral, social and intellectual duties of life. Nor is it a matter of minor importance, whether we consider man as preparing for a higher condition of existence or only in the capacity of a freeman, and as a member of a democratic government. But few, we fear, who call themselves *democrats* have a clear conception of the significance of that term. A democrat is one who assiduously studies and understands his individual rights; who is able to act the part of legislator or constituent; who is not the tool of party cliques, the slave of riggard passions, the ambitious aspirant after undeserved and unmerited honors, but in the broadest sense "a freeman whom the truth makes free." It is necessary then for the farmer, if there are no higher considerations, to be thoroughly educated in order to be a good citizen and true democrat. Acknowledging then the necessity for educating farmers, as well as merely professional characters—the necessity for developing and expanding their minds and imbuing them with the generous and ennobling sentiments which adorn the classics and commend elegant scholarship to all; still we do not see how this admission conflict with or diminishes the ne-

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cessity and duty of an education looking immediately to excellence in farming. This is lifetime business, and it is the first characteristic of a good and useful citizen, to see him surpassing others in some honorable, industrial employment. The merchant, who by close attention to business accumulates a fortune; the barrister, who by hard study has mastered the complexities of the law; the physician who has acquired a reputation for skill; the farmer who has brought science to the aid of practical sense—these are the useful men in any community. And it is to amplify this latter class, to bring science into immediate connection with skill, to inculcate true ideas of economy as distinguished from niggardness—to teach the relative duties of master and servant, to familiarize the farmer so far with the laws of health that he may guard against local diseases; to accustom him to order and regularity—to make him love the virtuous independence, the hardy joys, the innocent recreations of rural life—to make home, which has been beautifully and truthfully called “the garden of the affections,” more cozy, comfortable and attractive, that we propose a system of agricultural education.—The scope of such an education would be so much *book-learning* as could be practically illustrated on a model farm, and afterwards applied to the details of life.

This is but one step towards the “Prussian System,” to which we must come at last, if the spirit of reform is not checked by a *conservative ignorance*. That system is based upon the theory that education must come down to the masses—that a few educated men, diffused through the country, will, directly or indirectly, communicate to others higher aspirations as well as many of the positive blessings of superior intelligence.

The report on our first page does not contemplate connecting the movement any farther with the Agricultural Society, but we think the society could not labor for a more practical, more desirable, or more beneficial result than the organization of some plan for an agricultural school. Fairs, speeches and resolutions are well enough, but the money that is annually spent in these splendid pageants, would support an institution which would secure far more practical and permanent benefits to the agricultural interests of South Carolina.

[Yorkville Enquirer.]

From the Carolina Times.

South Carolina Agricultural College.

Messrs. Editors:—In furnishing the report which was received by the State Agricultural Society, and ordered to be printed for information at their late meeting, a word by way of explanation may be proper.

At our annual meeting in 1856, a resolution was adopted by the State society, appointing seven as a committee to report as to the best means of promoting agricultural education in South Carolina. The following report is the result of that appointment.

As I was the first to submit a plan for an Agricultural College in our State, I think it

proper to take this occasion to say, that it has been my design from the commencement to let the existing literary institutions of our State, stand upon their own merits and to keep the proposed Agricultural College separate, and distinct from all other institutions of learning, and let the proposed college stand or fall upon its own claims to public favor. Nor is it my wish to connect it in any way with the State Agricultural Society.

In asking the approbation of the members of our State Society to the plan of an Agricultural College, it was my sole object to secure the moral influence which the approbation of that Society might be justly considered to give to the undertaking.

SAM'L R. BLACK.

Columbia, November, 1857.

Your committee appointed at the last annual meeting of this Society to report as to the best means of promoting the cause of Agricultural Education in South Carolina, submit the following

REPORT:

That in appointing your committee as to the best means of promoting Agricultural Education in this State, the Society admits that Agricultural Education is right and proper, and desirable. This lessens the labor of your committee, and we come directly to the question, how can this object be most certainly accomplished? We believe the sure and short way to accomplish the desired object is to establish an Agricultural College.

In adopting this course we only follow in the footsteps of the most enlightened communities—not only in this country, but in Europe. There are in Europe at this time three hundred and fifty-two universities, colleges and schools, devoted exclusively to the cause of agricultural education, and in this country some ten or twelve, either in actual operation or secure in effecting their object.

So far, therefore, from being in advance of the age on this subject, we are really behind many of our sister States, some of them much younger than our own.

In recommending the establishment of an Agricultural College in preference to any other plan, we are influenced by the opinion that education must come down to the masses, in order to secure and perpetuate its blessings to the great body of the people. A few men thoroughly taught in all that appertains to a complete, scientific and practical agricultural education, disseminated in the different sections in our State, will stand as beacon lights amidst the general darkness around them, and will have a lasting and happy influence by their example and their ability to instruct their fellow citizens, in the different departments of their profession, and their every day pursuits in life; and at the same time, secure in the different portions of our State able and accomplished teachers to impart the blessings of a useful and practical education to a more numerous class of our fellow citizens.

In order to accomplish the object proposed, we think it best that the farmers and planters

should make an effort in the first place. The history of all applications to the legislature to assist the cause of agriculture, has proved a failure, if made in advance of individual effort. When our agricultural population, with spirit and success, have first moved on this subject, there can be no doubt that our legislature will unite with them, particularly when it can be shown that every interest in our State will be greatly advanced. By an improved state of agriculture, the material wealth of our State will be increased, and, as a direct consequence, our ability to pay; and an actual increase of taxes will amount to five times the sum which our legislature will find it necessary to expend in the support of agricultural education. When the time comes for the friends of such a measure to make an application to the legislature, these truths can be, and, no doubt, will be represented to the entire satisfaction of every man who will think and decide for himself.

In the single State of Virginia, the real estate or lands have increased in value, from 1850 to 1856, \$100,000,000. and this vast increase in the value of real estate has been mainly owing to the improving state of agriculture, together with the greater facilities of transportation to their markets.

In order that the friends of an agricultural education may have a *defined plan* of an Agricultural College upon which they can rely before subscribing the amount they may be disposed to contribute, your Committee present the following as the best they can recommend:

1st. We propose to raise, by subscription, a sum not less than one hundred thousand dollars, in shares of one hundred dollars, to be invested or appropriated by a Board of Twelve Directors, or Trustees, elected by the stockholders, each share having one vote. One-third of the stock subscribed to be paid to the Trustees in thirty days after their election and the organization of their company; one-third twelve months after said organization, and the remaining one-third two years after said organization. The funds so paid in to be deposited, by the said Trustees jointly, in the bank of the State of South Carolina, and drawn out under such special regulations as shall be sanctioned and authorized by the said Trustees.

2d. To purchase, at some place selected by the stockholders, each share having one vote as aforesaid, in a locality suited to the purpose such a quantity of land as may be thought most advisable by the Trustees. On this land, to erect college buildings and such other improvements as may be thought necessary, having regard to economy and the carrying out the object in view, and at the same time upon such a plan as will admit of a more extended scale of improvements, should the funds of the college justify and require it.

3d. Such a number of professors appointed by the Trustees as may be thought most advisable, under all the circumstances.

4th. The subjects upon which each of the professors is to devote his time are to be designated by the Trustees—the Trustees having in view a thorough scientific and practical agricultural education.

5th. The terms of admission, qualification, tuition, salaries, &c., to be regulated by the Trustees.

6th. On the land upon which the college buildings are erected, will be a model or experimental farm under the care and management of a practical farmer and planter, conducted in such a way as to afford the pupils the best means of witnessing the various experiments in agriculture, and at the same time uniting to the theory and science of agriculture, the details of practice.

7th. Each stockholder who shall subscribe and pay in ten shares, shall be entitled to send one pupil free of any charge for tuition; and for every additional ten shares one scholar on like condition

Respectfully submitted,
SAM'L R. BLACK,
GEORGE SEABORN,
S. V. CAIN,
R. A. SPRINGS.

NOTE.—The three additional members of this committee being absent, their names are not signed to the above report.

From the Unionville Journal.

Report

Of the Committee on Corn, read before the Union District Agricultural Society.

Your Committee on Corn, after a careful investigation of the subject assigned them, beg leave to offer the following report:

First, as to the variety of Corn. We have tried several varieties, and find many of them good; but none, so far as our experience goes, can surpass the old gourd seed, or selections made from that variety of corn. We think it highly important, and would earnestly recommend every farmer to select his seed corn either from the field or after it is cribbed.

Secondly, as to the mode of culture.—We think that too much attention cannot be given to the thorough preparation of land; in fact we find from experience, that when our lands have been well prepared and planted, that almost half the work is done towards making the crop. We usually, in preparing our lands, use the bull tongue, twice the length commonly used, and break the land deep once or twice, and then bed the land, using the twister. Distance of planting the rows, five feet apart.—Plant in the water furrow, usually three feet in the drill, on most of our uplands. In this we are governed by the strength of the land. We would suggest, that where lands are very broken, and not well protected by effective guard ditches, bedding of them had better be let alone. In cultivating the crop the first working is done by plowing with the bull-tongue or scooter, plowing close to the corn, going at least four times to the row. This plowing should be deep. The hoes follow this working, thinning, replanting and uncovering the corn. The next working we use the shovel plow, going four times to the row, and if we have the time, would plow out and out. The third and generally last plowing, we use the twister,

first running next the corn, then lap that furrow with the shovel plow, using this plow in making the remainder of the bed to the corn. We sometimes plow the fourth time, but this is owing to circumstances and the seasons, then seldom plow more than three furrows to the row. Between the second and last plowing, we go hurriedly over with the hoes, chopping weeds, grass, and thinning the replant. This work is done usually when there has been heavy rains, making the ground too wet to plow. We use all hands for this purpose. As to the average yield per acre, that is altogether owing to the productiveness of the land, whether poor upland or rich bottoms, or uplands made rich by manuring. We have made as much as forty bushels per acre on bottom land, and from fifteen to twenty on fresh upland, when the seasons were good, and on poor upland we have made scarcely the seed we have planted. We feel at a loss how to estimate the present crop. Some neighborhoods in the District have escaped the drought, and will no doubt make an average crop, whilst others have been seriously injured. Notwithstanding the late superabundance of rain, we do not think that early corn can make a full crop.—We are aware that some planters have plowed up a portion of their cotton and planted in corn; yet we have seen very little bottom corn that is first rate; so we conclude that if the seasons continue good from this on, and there should be no freshet upon the water courses, this crop may possibly equal that of last year.

JOHN C. GIST,
Chairman.

From the Wisconsin Farmer.
Good Horses.

MESSRS. EDITORS:—Every year's experience is proving to us our want of superior, serviceable horses in this section of our country, and the spheres and operations in which their services become needed and useful are also constantly increasing; and, hence, good sense dictates that we should make corresponding efforts to improve their character and increase the number of our horses among the farming community.

With a judicious selection of brood mares, it costs no more to raise a first class colt to the age of 3, 4, or 6 years, than to raise a poor one. The care and feeding of a colt worth three, five, or even ten hundred dollars, is no greater than that required to raise the ordinary colts, worth one or two hundred—the extra price for service of a first class, blood horse, being the only additional cost of raising a high-priced colt; and the same is true with regard to rearing superior animals in other departments of stock.

In New England and New York some of the careful horse breeders have raised and sold the colts of the "Old Black Hawk" when one, two and three years old, for as many thousand dollars, when the cost was really but little more than that of ordinary colts. There is a farmer not more than four miles from this city (Madison) who has three fine colts out of the old

original Black Hawk—genuine and no mistake—which would readily sell, with those knowing the fact, for the prices above named—and except for the price of service of the "Old Horse," they may cost the owner and raiser—Mr. Chas. Rice—no more than other colts in the neighborhood, which would not sell for a quarter of a price that these true Black Hawk colts will command. They are worth the trouble of riding miles to see. In the same yard may be seen some fine animals, the second remove, out of old Black Hawk's colts.

I have no interest in this stock, other than an earnest wish to see a more general practice among our farmers of raising first class animals, from good blood parents, though it may cost a trifle more in the first outlay; the result will pay from four to ten fold profit. In the first place let mares, with the good points and qualities be selected, together with good sires, and our stock of horses throughout the State will soon show the profit, both in their prices and serviceable powers.

There are none of the animal servants of man which perform so many pleasant duties for him, as the horse; next to our fellowman he is our most agreeable companion. In another article I propose to make a few suggestions in relation to improved horned cattle and their profits, merely to awaken more attention.

D. S. C.

From the Unionville Journal.

Report on the Pea Culture,

Read before the Union District Agricultural Society

The Pea is almost universally esteemed one of the surest and most valuable products of the Southern States. It is peculiarly adapted to our climate, and will grow almost anywhere. The varieties are numerous, and each has its fancier. Some are better adapted to one kind of soil than others; some are more prolific in vine, others in fruit.

We are of opinion that (all things considered,) the little Black Pea deserves to be ranked first as a stock pea. It is very hardy, not inclined to climb, does not rot in wet weather, or shell out of the pod. It will lay in the ground all winter, and vegetate in the spring. Its resistance to heat and moisture renders it also much safer food for stock. The next best variety is the Tory or Red Ripper. It is more prolific than the Black in vine and pea, but is disposed to climb, and is more liable to rot than the black.

There are ten or twelve varieties of "Crowders," all prolific; but they are great climbers, and will rot in wet weather. There is a long flat pea, with a red pod, which makes a good table pea, but it is not very prolific, and is easily affected by the weather, and subject to be weevil eaten. There is also a new variety known under the various names of Java, Shinnery, Jefferson, Whippoorwill, Partridge, Speckled Pea, and Life Preserver. We have heard it said that this pea was introduced by Mr. Jefferson from Java, during his administration, but cannot vouch for its correctness. The Ja-

va is a prolific pea, and will mature in 8 or 10 weeks, under favorable circumstances. It does not make much vine, and is inclined to shed its peas as fast as they ripen, and put out more blossoms and make new pods. It cannot stand wet weather—the peas rot very easily, and shell out when the sun is hot. This pea, however, possesses one great desideratum for the cotton planter—it will mature soon enough to be picked out before the busy season comes on, and it can be sown with corn when laying by, with a reasonable prospect of making a good crop.

Notwithstanding the acknowledged importance of the pea crop among us, it receives very little attention. It is generally planted at the 2nd or 3rd plowing, with the corn, when it can receive very little work, and cannot do much in the way of growing until the corn is made and the fodder taken off. To be made profitable as a crop, it should be planted and cultivated by itself; and with very little care in this way, it can be made to pay on almost any soil. It is not reasonable to expect a fine yield of peas and corn from the same field at the same time. If they both make their fruit at the same time, they must interfere with each, and tax the soil heavily—for they derive their support from the same source, and contain elements near akin to each other.

It has been argued by many persons that the pea was a fertilizer—that it was the clover of the South; and the shortest and most economical means by which our lands could be restored to their original fertility, would be by the pea. This is claiming too much for it. By fertilization, we mean any process by which we restore to the soil those constituents of plants which have been taken from the soil by repeated cropping.

We are taught by analysis, that the pea contains potash, soda, lime, magnesia, phos. acid, sulph. acid, iron—these are all mineral properties, and must be derived from the soil, and if taken from the land, must exhaust it. If returned to the soil, it only gives back what it received from it, with the addition of the carb. acid and ammonia which it received from the atmosphere. From this it would appear that the pea cannot be relied upon as a fertilizer.

We have no doubt, however, of its value as an ameliorator. By amelioration, we mean any course by which the capability of a soil to yield crops may be improved without the application of manure—such as rest, rotation and turning under green crops. A soil, by one course of treatment, may be made to yield the proper food for plants readily and abundantly, while by another it may be made to lock up its treasures in a most miser-like manner. North of us, clover is the great ameliorator—but how is it used? The soil is well prepared, deeply plowed, harrowed and rolled—wheat sown, guano or other manure added—clover sown on the wheat. When the wheat is harvested, repeated doses of Plaster Paris are given to the clover, to force it into luxuriance—after three or four years, wheat sown, and a heavy clover crop turned under with it, &c.

Now, if our lands were covered with pea

vines, repeated applications of Plaster Paris, and the vines turned under, the improvements would be manifest. The pea has a long tap root, which sinking deep into the soil, would bring nearer to the surface the food of plants, while the broad leaf of the vine would protect by its shade the soil, and store up carbon and nitrogen derived from the atmosphere and soil, for the future use of plants.

The pea can never equal the clover, because it does not answer the purpose of clover in winter; but it is our best substitute, and we have no doubt but soils may be kept in better heart, and protected against deterioration for a long time, by rest and turning under the pea as a manure, more economically than any other process.

How to make Strawberry Beds.

Two points must be understood, to grow the best strawberries:—1st, that the soil must be deep, and 2d; that it must be rich. If you look at the leaves of a strawberry, and because they are not very large, presume that the roots will extend but little depth, you are greatly mistaken. I have seen the roots of strawberries extend five feet down in a rich deep soil; and those plants bore a crop of fruit five times as large, and twice as handsome and good, as the common product of a soil only one foot deep.

The “moral” that your readers are to draw out of this digression is, that they cannot well make their soil too deep for the strawberry.—Perhaps they cannot afford to make it three feet deep, which is the right depth, for an extra fine crop; but, at all events, they can make it two deep. And now a word as to manuring it.

It is all very well to talk about composts and “well rotted manure.” The real truth is, that in our careless country, not one gardener in a hundred has such things ready for use at the moment he wants to prepare his strawberry patch. What people have at hand from one end of the country to the other, is fresh stable or barn-yard manure; and the question is, how to use that to the best advantage.

The true way to do this, is to throw out the soil where your beds are to be made, two feet deep. Fill up the bottom eight inches, or a foot deep, with fresh stable manure, mixed with the litter, treading it down firmly. Then cover this with two-thirds of the soil thrown out, rejecting the worst part of it. This will raise the bed four inches above the surface; and as it will settle about four inches, it will be about level after it is settled.

This is all the preparation which I give my soil, and it is all that any soil of fair quality needs; only that I would much prefer to have it three feet deep, than two feet, and to have sixteen inches of stable manure and litter at the bottom than eight, though the latter brings heavy crops in a good soil.

You may put out your plants in August (September in Ohio,) or April. The only difference is, if planted in August, you may lose

half of them by the heat and drought, unless it is a rainy season; while in April, you are certain not to lose a single plant, unless it is unsound when you transplant it.

To my mind there is no way of growing strawberries half so complete as in beds three and a half feet wide, with three rows in each—the plants in the rows kept clipped of their runners, and the ground between the rows nicely covered with straw all the year round. The largest and finest fruit is obtained in this way, and the beds themselves will last many years; while if they are allowed to cover the bed, you can, at the most, expect only two crops, and, generally, the fruit is of little, or no value, after the first crop.—*The late A. J. Downing, in the Horticulturist.*

From the Unionville Journal.

Report

Of the Committee on the treatment and value of the Milch Cow.

Our experience has been with the scrub cow, with the common food of our farms, viz.: shucks, straw, hay, cotton seed, turnips, beets, peas and cabbage, for winter food. To cook this feed will increase the yield of milk one-third over the raw food; and if you are well prepared with water and wood convenient to your feeding place, it will pay to cook, except the cotton seed, which will pay best if put on your land. Amount to feed—for each cow, half a bushel, night and morning, of equal portions of cotton seed, beets, turnips or cabbage, shucks, hay or straw; boil the turnip well before putting in the rest of the food, season with salt, and add one peck of corn meal bran or wheat bran. With this treatment they will have their calves from 12 to 18 months, and the third class of scrub cow will give one gallon of milk per day, for seven months—210 gallons make 42 lbs. butter, and save 83 lbs. meat fed to negroes, and at 12 cents per lb., \$12.60. The second class, one and a half gallons for eight months, 240 days, 360 gallons, \$21.60. First class, two gallons per day for ten months, 300 days, 600 gallons, \$36. Blooded cattle, Durham, Devon, Ayreshire and other unknown bloods, third class, two gallons for ten months, 300 days, 600 gallons, \$36; the second class, three gallons per day, for 330 days, 1000 gallons, \$60; the first class, four gallons per day, 365 days, 1,460 gallons, \$87.60.

Every farmer should shelter his cattle in winter. It pays well for the cost of shelter.—Feed in troughs or racks is a saving worth our attention. The planters have every inducement to improve their stock. Every importation of blooded cattle made to this country, for the last half century, has marked its improvement. The first English cattle known among us, were by old Mr. Dugan and Col. Joseph Gist, of Pinckneyville; the next, to our knowledge, by Hampton, of Columbia. He distributed with his friends in our district, several crosses—Gov. Johnson, John Gage, of our village, and also with the Simses. All proved themselves greatly superior to the scrub cow. John

Gist, of Pinckneyville, obtained a Durham bull and cow from Kentucky. This was the best cross within our knowledge. Z. P. Herndon, a Devon bull, very handsome—Col. Gage, an Ayreshire—several in our adjoining districts, have imported very much to the improvement of their stock. T. B. Jeter has purchased, in company, a very handsome Devon bull from Dr. John Herndon, of Newberry District, to be delivered in June; he will make a fine cross on the large Durham. Col. R. Beatty has several Durhams, purchased from Kentucky; a calf from the stock took a premium at the State Fair, which speaks well for his attentions.

We hope our planters will learn from the present high prices of meat, the value of the cow. Every planter can, with one-third less stock on his farm, with some attention to milking and feeding, save one half the meat fed to negroes. Our country requires mixed husbandry, and it is time we should begin.

Directions for Milking.—Every milker should kneel with the left knee, and place the bucket against it, and touch the flank of the cow with front of the head, and milk with both hands.—Any movement of the cow will warn the milker of any disposition to kick or run.

Respectfully submitted,

J. E. MENG, Chairman.

Coffee and Milk.

We believe that it is almost universally admitted by the most learned physicians that the use of coffee is absolutely pernicious to persons in ill health, as well as injurious to those who are well. It no doubt lays the foundation of much of the nervous derangements and diseases with which many are effected. The following letter from a distinguished physician, of Paris, to the editors of the *Scientific American*, may be of service to some of our readers, we therefore give it a place.—*Valley Farmer*:

“Dr. D. A. Caron, of Paris, has recently been engaged in investigating the effects of breakfasting on this favorite beverage, and from the results, he thinks he is justified in asserting that the most of the nervous and allied disorders which affect the dwellers in large cities are traceable to this source. He further informs us that when the coffee is mixed with milk, its nutritious properties are neutralized because of its fermentation being retarded. Coffee and milk in a bottle were twenty-seven days before they began to decompose, while milk and sugar were only three days. It is evident that the astringent properties of the coffee hinder the digestion of the milk, and at the same time, the caferne (or active principle of coffee) is set free, and acts on the membrane of the stomach in the same manner as vegetable alkalies, producing most disastrous consequences to the digestive apparatus. He tried many experiments on himself and friends, and found that in a few hours the pulse was lowered from 80 to 68, from that it went down to 56, when he took some food and it immediately rose to 78. He concludes by informing us that many cases of irritation, nervousness and hy-

teria have been entirely cured by a gentle course of tonics, and giving up the use of coffee."

From the Wisconsin Farmer.

Agricultural Institutions---Land Grants by Congress.

We rejoice to see so general a waking up on the part of intelligent men, to the importance of Educational Institutions for the farmer.—Agricultural education is beginning to attract the attention of political economists as well as scientific men.

The National Government has hitherto been strangely partial to Commerce and War, as though they were the great interests of our nation, paramount to all others, and therefore alone worth fostering—forgetful of the great truth that the intelligence of the people is the *sine qua non* of a Republic; that such intelligence involves something more than the education of the professional classes who constitute a very small minority of the population of any country; that the only hope for security and national prosperity lies in the intelligence of the industrial masses—in the elevation of the *million*. But recently some of our Statesmen are opening their eyes to this great matter, so long shamefully ignored, and are beginning to see that a branch of industry which involves more than five billions of dollars as capital, the actual and entire effort of nearly seven-eighths of our whole population, and the happiness and prosperity, nay, the very existence of all, is an interest worth fostering.

By common consent ours is an agricultural country, and the States of our Union have been and always will be chiefly dependent for their wealth and power upon the natural products of the earth. It is our rich valleys and fertile prairies that have made us what we are, as a nation, to-day. We are also a race especially adapted to an agricultural life; and yet, for the want of knowledge of the principals involved in the practice, the soils of every State in the Union are rapidly depreciating. American agriculture yields the most meagre results, compared with its resources, of any enlightened country on the globe! And this mortifying fact must stand there on the world's table of statistics until the ninety-nine-hundredths of American farmers are no longer grossly ignorant of the *science* of husbandry. Multiplied millions of money might be saved to the country every year by an application of the science of agriculture, as at present developed, and if we had Agricultural Colleges established in every State, in charge of scientific and practical men, new and valuable contributions would constantly be made to the present stock of knowledge. Such institutions must be established, and the sooner the better—not such institutions as are here and there attempted to be palmed off upon the people in the form of mere *nominal* departments, but broad, liberal departments or separate institutions, furnished with experimental farms, all needful apparatus, and officered by the best talent in the country.

Institutions like this can hardly be establish-

ed without aid from the Government. But the would-be wise politicians and pigmy statesmen of the day, while they effect a great and tender regard for the "dear people," instead of looking the question steadily and candidly in the face, examining its claims and yielding thereto a cordial endorsement and hearty support, content themselves, and endeavor to content their constituents, with whining cant about the constitutionality of *such* appropriations.

It is perfectly constitutional to appropriate millions annually for "the common defense," and even to conquer neighboring States; constitutional to make appropriations for the establishment and support of military academies; and even constitutional to aid in the establishment of classical and professional schools for the benefit of the few—the one-eighth of the people—but altogether *unconstitutional* to contribute even a few acres of land for the benefit of the many—for the education and elevation of the remaining seven-eighths—"to promote the *general* welfare," and through the intelligence of the rural population of our country, added to their acknowledged virtue, the more effectually "secure the blessings of liberty to ourselves and our posterity."

Over thirty millions of dollars annually are spent by the General Government in maintaining the War Department, while the only branch which includes or to any extent fosters the all-important interest of Agriculture, is turned off with a few thousands. Even the Committee on Agriculture in the Senate has been abolished, so that the people are turned out of doors, and sentenced to be henceforth as heretofore, mere "hewers of wood and drawers of water." How long the "sovereigns" will patiently submit to these indignities and this habitual contempt on the part of their servants remains to be seen.

But light is dawning, and already the murmur of discontent is heard among the million. Agricultural papers, and Agricultural Societies, aided by a few earnest, scientific men found here and there, and increasing in number, have at last found an echo in the hearts of the people, and wise legislators will open their ears and their hearts to their just demands. A Bill has been introduced into Congress, for the appropriation of public lands to the establishment of Agricultural institutions in all the States, and many of the States are pouring in their petitions for its passage. Our own State will join them, and our Representatives and Senators in the National Legislature have enough intelligence, patriotism and philanthropy to heartily second and earnestly support the measure.

Moreover, several of the States are moving already, for the establishment of such institutions and are determined to have them, whether Congress make appropriations or not. Our own State, we believe, will be of this number, and we earnestly hope our Legislature, during its present session, will demonstrate its appreciation of the true interests of Wisconsin, by first passing a liberal act and then memorializing Congress for the requisite aid. H.

Farm Life.

"Oh, friendly to the best pursuits of man,
 Friendly to the thought, to virtue, and to peace,
 Domestic life, in rural pleasure past!
 Few know their value, and few taste thy sweets;
 Though many boast thy favors, and affect
 To understand and choose thee for their own."

[Cowper.]

Education is by no means confined to schools. These are but rudimentary and auxiliary to that training which is begun in the cradle and finished only at death. The nursery days of our life, and its business pursuits, have an important bearing upon the formation of character. What a man does, as well as what he studies in books, educates him. The scenes amid which his boyhood is passed, out of schools, the objects which occupy his thoughts, the problems he daily solves in earning his bread, quite as much shape character as the scenes and problems of the school room. Agriculture is the largest and most important of all our material interests, the occupation to which the largest portion of our countrymen are born. It is a matter of interest to consider the bearings of this pursuit upon the characters of those who are engaged in it.

There are those who consider this a menial occupation—degrading to the body by the toil it imposes, and belittling to the mind by the attention it requires to the minute details of its business. They regard its implements as the badges of servility, and look with disdain upon the plow-boy's lot. They depreciate the influence of farm life upon the social and mental culture, and look upon the rustic man as the type of boorishness and ignorance. They think it mainly a business for brute muscles, where mind can achieve no conquests, and where skilful labor finds a poor reward. They think the way of a man of genius is inevitably hedged up upon the farm—that there is no heroic work to be performed, no laurels to be won. If he would do deeds worthy of his manhood, gain wealth, gain honor, make himself a name that will live, he must turn to nobler occupations.

If those who are strangers to the farm alone cherished this view, we could abide it in silence. But when farmers themselves admit this impeachment of their calling, and the pestilence of this heresy finds its way to our firesides, and makes our sons and daughters discontented with their rural homes, it is time to speak out. If comparisons must be made, which are invidious, the shadows shall not fall upon the farmer's lot. It is time that other callings were stripped of that romance with which they are veiled, and that the sons of the farm should know what they have in prospect when they turn their backs upon the homes of their youth. It is meet that they should better understand the blessings of their lot, its capacity for improvement, and its superiority to all other occupations. We would arrest that feeling of disquiet which keeps so large a portion of our rural population perpetually longing for new fields of enterprise. We would have them settled, at least a portion of them, in the old parish, and bend all their energies to the improvement and adornment of their homes.

[Rev. Wm. Clift.]

To Ascertain the Weight of Live Cattle.

Experienced drovers and butchers are in the habit of buying cattle, estimating their weight on foot. From long observation and practice they are enabled to come very nearly to the actual weight of animal; but many of them would be most apt to err, if all, on the right side; while the less experienced farmer always stands the greatest chance to get the worst of the bargain. To such we would recommend the following rule to ascertain the weight of cattle, which is said to approach very nearly the truth in most cases. The proof of this to the satisfaction of any farmer, is easily determined at most of the annual fairs, where scales are erected, and at numerous other points in the country.

RULE.—Take a string, put it around the breast, stand square just behind the shoulder blade, measure on a rule the feet and inches the animal is in circumference; this is called the girth; then, with the string, measure from the bone of the tail which plumps the line with the hinder part of the buttock; direct the line along the back to the fore part of the shoulder blade; take the dimensions on the foot rule as before, which is the length; and work the figures in the following manner: Girth of the animal, say 6 feet 4 inches, length 5 feet 3 inches, which multiplied together makes 31 square superficial feet, and that multiplied by 23 (the number of pounds allowed to each superficial foot, of cattle measuring less than seven and more than five feet in girth,) makes 713 pounds. When the animal measures less than nine and more than seven feet in girth, 31 is the number of pounds to each superficial foot.—Again, suppose a pig or any small beast should measure 2 feet in the girth, and 2 along the back, which feet in girth and 2 along the back multiplied together, makes 4 square feet, that multiplied by eleven, the number of pounds allowed to each square foot, of cattle measuring less than three feet in girth, makes 44 pounds. Again, suppose a calf, sheep, &c., should measure 4 feet 6 inches in girth, and 3 feet 9 inches in length, which multiplied together make 15 1/4 square feet; that multiplied by 16, the number of pounds allowed to cattle measuring less than 5 feet and more than 3 in girth, makes 265 pounds. The dimensions of girth and length of horned cattle, sheep, calves and hogs, may be exactly taken in this way, as it is all that is necessary for any computation, or any valuation of stock, and will answer exactly to the four quarters, sinking the offal. The rule is so simple that any man with a bit of chalk can work it out. Much is often lost to farmers by mere guess-work in the weight of their stock, and this plain rule is well worth their attention.—*Valley Farmer.*

The city builder, to save cost of land, runs his buildings up two, three or four stories high. So should the farmer cultivate his farms, downward another story, to save surface.

If you're out of debt, you're out of danger.

The Michigan Agricultural College.—We are very glad to hear through Hon. Joseph R. Williams, the President of the Institution, that the Michigan Agricultural College, the pioneer of this class of Institutions in the United States, is fairly started, and has passed through one term of very successful experiment. The next term will open, we understand, with more than a hundred students. The Institution is popular with both people and students, and the most complete success is anticipated for it.

It is the design of the Trustees to make an application to Congress for a grant of lands which will give them a more liberal endowment. We wish them success in their application. Surely while the public domain is being bestowed so freely and liberally, an object so worthy, can hardly be rejected.—*American Farmer.*

New York State Agricultural College.—A meeting of the Trustees was held in Albany, on 17th ult., at which the plan and specifications for the College buildings, prepared by S. E. Hewes, architect, of Albany, were chosen, and \$250 awarded him for the same. Awards of \$100 each, were also made to H. M. Wilcox, architect, Buffalo, and Rev. H. B. Taylor, of Fort Edward Institute, for plans and estimates submitted by them.

The President and Secretary were directed to prepare a memorial to be presented to Congress, asking for an appropriation to each State of the Union, of so much of the public land as will be sufficient to endow and put in operation, an Agricultural College in each State in the Union.—*American Farmer.*

A wrinkle about the Age of Horses.—The editor of the Southern Planter says:

"The other day we met a gentleman from Alabama, who gave us a piece of information as to ascertaining the age of a horse, after it has passed the ninth year, which was quite new to us, and will be, we are sure, to most of our readers. It is this: After the horse is nine years old, a wrinkle comes on the eyelid, at the upper corner of the lower lid, and every year thereafter he has one well-defined wrinkle for each year of his age over nine. If, for instance, a horse has three wrinkles, he is twelve; if four, he is thirteen. Add the number of wrinkles to nine, and you will always get at it. So says the gentleman; and he is confident it will never fail."

Distinguishing Cotton from Linen.—Cotton may be distinguished from linen in a cloth fabric by means of a good microscope; the former fibres being flat, riband-like, and more or less contorted or shrivalled, and the latter straight, round, and with cross-knots at certain distances. These two fibrous matters may be also distinguished by the action, at a boiling heat, of a strong caustic lie, made by dissolving fused potash in its own weight of water. By digestion in this liquor, linen yarn becomes immediately yellow, while the cotton-yarn remains white. The best way of operating is to

immerse a square inch of cloth to be tested for two minutes in the above boiling hot caustic lye, to lift it out on a glass rod, press it dry between folds of blotting paper, and then to pull out a few of the warp and weft threads, when the linen ones will be found of a deep yellow tint, but the cotton white or very pale yellow.—*National Intelligencer.*

Cure for the Garget.—Some two or three years since we published the following recipe for curing garget, and from actual experiment in this vicinity, we know it to be a good one.—Mr. Lowell Greenleaf writes to one of our agricultural exchanges, (we have lost the credit,) giving an account of his trials of the recipe, and its results, as follows:

"Having had a cow that was almost worthless on account of bunches in the udder which rendered the milk bloody, stringy, and not fit for the hogs, I was on the eve of giving her up for lost, when I used the following recipe, which in three weeks restored her to perfection, and not the slightest symptom of garget has appeared since. I could cite numerous cases of perfect cure. And not only doubling the quantity but also improving the quality of the milk and butter. Since I applied this remedy, my cow has, in two years, risen in value from \$20 to \$75:—

Recipe.—"An ounce and a half of hydriodate of potash, at 440 grains to the ounce, will contain 660 grains. Put the whole into a glass bottle of sufficient capacity, with fifty-five table spoonfuls of cold water. Shake briskly, and it will be thoroughly dissolved in a few minutes; one table spoonful will contain a dose, the requisite quantity of twelve grains. Wet a little Indian meal or shorts and thoroughly stir in the dose. Give two or three doses a day.—Keep the bottle corked tight."—*Ex.*

Tabacco Boys.—Tobacco boys will make tobacco men, with tobacco mouths and tobacco teeth and tobacco breaths and tobacco pockets and a general tobacco smell. And what is worse they will have tobacco appetites which will crave tobacco enough in their lifetime to feed them, to buy a small farm and raise a small family. They will moreover spit tobacco all along their way through life, to the annoyance of their neighbors and the displeasure of their wives and families.

[*Valley Farmer.*]

Cheap Paint.—If any of our readers wish to use a very cheap and substantial paint, of a drab color without lustre, let them mix water lime with skimmed milk, to a proper thickness to apply with a brush, and it is ready to use. It is too cheap almost to estimate, and any one can put it on who can use a paint brush. It will adhere well to wood, whether smooth or rough—to brick, stone or mortar, where oil paint has not been used, in which case it will cleave to some extent, and forms a very hard substance, as durable as the best oil paint.—*Country Gentleman.*



The Farmer and Planter.

PENDLETON, S. C.

Vol. IX, No. 3, : : : : March, 1858.

That "Chapter on Fault Finders"

Will be found in this number, and will astonish no one more than it has the Editor. It seems the Executive Committee have stood fire till they find the enemies ammunition exhausted without "blowing up the Society," or "transporting" them "to parts unknown," and they or some volunteer for them, now sally forth to return at least one broad side, but most of their shots seems to have fallen short of the mark, as but few of the assailants have been touched. The principal aim seems to have been at the "Editor," who, it would appear, is considered the leader of the opposition, and whose white flag which he has constantly displayed between the parties, and which, it seems, was mistaken for some "infernal machine," is pretty well riddled.—A few others are roughly handled. Our old friend who had fortified himself with *wool sacks*, must doubtless come to the conclusion that they are not altogether bullet proof, as were Gen. JACKSON's cotton bales at Orleans.

But metaphor aside. So far as the Editor is concerned, he is not disposed to "kick up a row" with the Executive Committee or their champion, "One of the Clerks in the Office;" but instead, will refer his readers to the article under the head of "The State Fair," page 290, Dec. No., that they may judge between us, whether or not he "complains at being assigned a post of honor," or whether he "condemns out and out our (the Executive Committee) mode of appointing Committees." We did "suggest the appointment of Committees before the meetings and their publication," which we believe is the practice of most other State Societies, because we thought, and yet *believe* it would work best; but because we ventured to differ with the Committee in this matter, we deny that we "condemned" their proceedings. We deny, also, having "complained at being assigned a post of honor," or in other words, at being placed on a Committee. We thought and yet think, (as stated in the offensive article) "that if any person was entitled to be relieved from Committee duty, we were one of them," "but we complain not," &c. The above are not the only complaints we are accused of making, it is said, "again the *chief* complaint—really the only charge worth consideration against the judges—is favoritism." We would here ask who did we make this "complaint" or "charge" against—

was it against the Committee or against the *course* we had suggested? We say "if anything is to be feared, (meaning in the course we had suggested) it is prejudice and favoritism," &c. No. We emphatically deny having complained of, or condemned the Committee, either in the article alluded to, or any other article, even in the report on the plowing match, in which it is said in the bill of "complaint" *against us*. "In the report of the Committee on plowing match, a regular bill of indictment is filed against the Executive Committee for neglect of duty"—(the italic's our own) In answer to which charge we again refer to said report, page 291—same number as above. And we will here only add, that in our report under the head "Miscellaneous Articles," we found in our book all that we have enumerated, and had some difficulty in deciding whether or not they were entitled to a recommendation even of a premium from us. It was not stated in our book, nor had the Secretary informed us, as it seems he did the exhibitors, "that no premiums were offered" for them; but on being referred to the clause under the head, "*Articles not Enumerated*," which will be found in our report, and in which nothing is said about the articles being of "Southern Manufacture." the Committee did recommend premiums, notwithstanding the after clause under head, "Instructions to Judges, &c." And so doing they say "The Committee respectfully submit to the Executive Committee, whether or not they shall be given." It appears that premiums were not given, but our Committee, instead of bringing a bill of indictment against the Executive Committee, have, as will appear from our report, carried out their intention more fully in the "way of advertisement," by enumerating them in their *published* report, than they could have done by a mere examination of them.

But we will close, as we have already written much more than we intended on this subject, with the remarks that the writer of "A Chapter on Fault Finders," has not placed us in our true position towards the Executive Committee, and there is about as much propriety in the attack, as there was in attempting, by certain members of the Society, to place us in antagonism to the organization of the Society, because we differed as to time.

Ad Interim Committee.

A friend writes us: "I would not attempt to instruct the Executive Committee, for they have been taxed quite enough, but hope they will appoint an ad interim fruit committee at Columbia, to open in time for the strawberry crop. I hope we will have a much better fruit year than last season."

If we are not mistaken, there is such a committee, that holds its meeting at Columbia, either weekly or monthly, through the fruit season.

Thanks.

Our honorable Senators, Judge EVANS and Gov. HAMMOND, are again tendered our thanks for book, seeds, &c. We have a number of papers of Cuba and Maryland Tobacco Seed, that we would be pleased to distribute amongst our subscribers.

"Laurens."

We welcome our old and much esteemed correspondent, "Laurens," again to our columns. We are always glad to hear from such contributors; and although we differ from him on the subject in controversy, we admire the true spirit of his communication.

We would that all our correspondents would observe the same courtesy, kindness and candor in their communications. There is no use for farmers and planters to quarrel and say hard things against each other in their controversies. Unlike other professions, we do not stand in each others way. We should not consider ourselves rivals only in increasing the productions of the earth, and contributing to the improvement of agriculture. In this noble calling we should consider ourselves as a band of brothers, going heart and hand in the cause in which we are engaged. There is every thing in it to inspire the most kindly and brotherly feelings. We are worshippers at the same shrine.—We bow at the same altar. The God of the Universe is our common father. He has spread out in the field of nature in which we operate, the most inviting subjects for our contemplations, and the most enlarged views of his bounty and beneficence. Instead of the bickerings and animosities of party spirit and the contentions and feuds of personal enmity, we should cultivate the most friendly feelings towards each other, and hail with joy any discovery by which the interest of agriculture can be advanced.

Agricultural Education.

In this number will be found the report of the Committee appointed by the S. C. Agricultural Society, in 1856, to report as to the best means of promoting agricultural education in South Carolina. We had intended prefacing this report with some remarks of our own, but on reading the very appropriate remarks of the Editor of the "*Yorkville Enquirer*," accompanying the publication in that paper, from which we extract, we find them to be so much in accordance with our own views, that we adopt and preface the report with them. We will only remark that several of the States are moving in the matter—some much younger than our own, are setting examples that we might well be proud to follow. In a late number of the "*American Farmer*," we find old Maryland is up and a doing. By the time of this writing, no doubt the twenty-five thousand dollars which the charter requires to authorize the election of Trustees, have been raised. On the election of the Trustees, arrangements will be made, and the school will go into operation at the earliest possible day. From an article in the Dec. No. of the "*Cotton Planter and Soil*," we understand there is now under way, in Georgia, near Griffin, an Agricultural School under the superintendence of a gentleman devoted to the cause, and in every way calculated to carry out the objects of the institution.

The Rev. CARLISLE P. B. MARTIN deserves great praise, and the patronage of the whole State, which he will receive. His school now numbers some 80 young men, and at least 40 have been

refused admittance for want of room, &c. And what has South Carolina done in the way of agricultural schools? Nothing! *nothing!!* Recollect what attention was paid to the recommendation of our excellent Governor in his message to our late Legislature, respecting the little school of the lamented DE LA HOWE, in Abbeville. Suppose his excellency had recommended an appropriation for a school to prepare teachers of lawyers, doctors, preachers, politicians, &c., &c.; believe you, brother farmers and planters, that the recommendation would have died with the reading of the message! But lest we may be misunderstood in the above remarks, respecting the professions alluded to, we say we have all *due* respect for all of them, (especially the M. D.'s, who support us more liberally, according to numbers, than do the farmers and planters), but they are, by our State, an overfed class, to the starving of our equally worthy one. We encourage schools for consumers and non-producers, but make no provisions for the great producing material.

At the late meeting of the Society, the report on being read, was ordered to be printed "for information." It first made its appearance in the "*Carolina Times*"—whether the "*Times*" published it for information of its readers or not, as has been enquired of us, we know not.

The Premium List for 1858.

"MR. EDITOR:—Will you please inform me where to find the Premium List of our State Agricultural Society, for 1858? I have been looking for it in the January and February numbers of the *Farmer and Planter*, but so far have looked in vain. Has it been published?

A LIFE MEMBER."

REMARKS.—"A Life Member" is informed that we are not able to answer his inquiry satisfactorily. Up to this date we have neither seen or heard anything of the Premium List for our next Fair. We presume, however, unless some one of the Columbia papers beg the job, we shall lay it before our readers ere long.

Since writing the above, we have received a note from the Secretary. Col. GAGE, who says, "I have the next Premium List under way. It covers the appropriation \$5000, and I think the best list I ever saw." So you that want premiums at our next Fair, may go to work, no matter what you strike at, you can hardly go amiss, unless you happen to get on the "*Miscellaneous*" track.

Reports from Post Masters.

DIAMOND HILL, S. C.

"You will discontinue W. Q. Martin's paper, as it has not been taken out of the office for a long while, and I understand he has left for *parts unknown*—(perhaps in Georgia)."

P. M.

This man, W. Q. MARTIN, owes for 5 volumes of the *Farmer and Planter*, and we suppose is able to owe it.—Ed.

OAK BOWERY, ALA.

We are informed that ISAAC PARKS has left for Texas, and left us for 4 volumes—four dollars minus; and JAS. TAYLOR, of the same office, owes for 4 volumes—\$4—repudiates both paper and debt. Pass them round.

We have about half a score of repudiating subscribers, owing from 5 to 8 dollars, at Conwayborough, in our own State, that shall have a showing, if they do not demonstrate to us that they are honest men before long.

Agricultural Education.

In addition to what is already said on this subject in our present number, will be found some other selections. An excellent article taken from the "*Wisconsin Farmer*," headed "Agricultural Institutions—Land Grants by Congress," is well worthy the attention of our readers. A number of petitions have been sent from our State, asking for a grant of land, for the purpose of establishing an Agricultural Institute in our State, but we are not quite certain, if a donation is made us, that it will not be appropriated to the sustaining of other professions than that of agriculture.

Ourselves and our Labors.

Whilst some of our subscribers—not quite as honest as Caesar's wife was virtuous—are quitting us and leaving "for parts unknown," recollecting to forget to pay perhaps for half a dozen or more volumes; and others with best intentions and disposition, through mere negligence and lukewarmness, are failing both to pay their just, and in many instances, long standing dues, and to encourage others to come forward to our assistance, it affords us no little pleasure, and some remuneration for our devotion and services in the cause, to receive from our warm friends, occasionally, such letters as we make extracts from a few of, without giving names, as they were not written for the public eye. Such letters, we consider, are calculated to stimulate others as well as ourself, to action and for which reason, and not from any vanity,—of which we will hardly be accused of possessing an overshare, by those knowing us best—that the extracts are made. And we take occasion here to make our grateful acknowledgments, not only to the writers from whose letters we extract below, but to many others whose proper appreciations of our services, are so kindly and encouragingly acknowledged. And first, we extract from the letter of a new recruit, who shows that he is not only an honest and honorable man, but one greatly devoted to our cause, as is the case with those that follow:

MR. GEORGE SEABORN—Sir:—J. J., of —, to whose address you sent your paper, has been over two years dead. When not absent in Mississippi, I took out and read your paper last year and the present year. I therefore send you the subscription for those two years; not having looked over receipts, I do not know whether my father was in arrearages with you for any other year; of this, notify me pri-

vately, at —. The administrators neglected to attend to the matter, and the estate is settled; but I think proper to make this enquiry for myself, at this late day—they say it is scarcely ever too late to do good.

I would like to have the paper continued and directed, instead of J. to A. P. J., of —. I desire to continue and patronize your paper, because, 1st, it is worth all—more than you ask for it. 2ndly, it is a paper of our own State. In the third place, it was the first (not the first.—Ed.) in our State, to do battle in the great cause in which it is engaged, and, in my humble judgement, has contributed much, very much, to that reform and progress that is so manifestly characterizing the present.

Your paper, sir, has done, and is doing much in placing agriculture on that high ground to which it is entitled in the picture of professions. Many a politician, for doing much less in developing the resources of the country, and for the good of the people, than you, sir, has attained high civic honors and distinction. And allow me, here, to express the hope that justice—"though tardy of foot"—may not fail to reward you. Most respectfully yours, &c.,

A. P. J.

LEXINGTON DIST., S. C.

DEAR SIR:—Enclosed I send you one dollar for the Farmer and Planter. I am sorry to hear of the death of your printer, and much more so of your talking of selling out, but I still hope you will continue, as we must have some agricultural paper if we want to improve in farming, and he that does not improve the soil, will soon be surrounded by old fields, and have to leave for the West. I cannot see why every body does not take the Farmer and Planter, as it is cheap and instructive, and the time is fast approaching when men will find out that farming is a science, and that the old fashioned way of murdering the earth will not do. For my part, I cannot do without the paper, and have sent on for next year, as it is the secret of all business to attend to it in time. I hope all will be punctual, and let you start the next volume with a full pocket, happy and great success.

I remain your friend, &c.,

S. B.

ABBEVILLE DIST., S. C.

DEAR SIR:—Enclosed you will find my contribution for the Farmer and Planter, which has been due you more than a month, though I hope you have suffered no inconvenience from its delay. I again bid you God-speed in the noble and ennobling work in which you have been so long and ably engaged. When the farmer, or rather farmers generally, have emerged from the long night of ignorance and old fogysm, by which they have been surrounded, it may then be your proud and happy lot to recognize in this glorious achievement, a far more valuable compensation than dollars and cents—a consciousness of having rendered efficient service in effecting such results.

I remain yours, truly,

R. S. G.

LAURENS, S. C.

MAJ. SEABORN—*Dear Sir*:—Enclosed please find one dollar—the price of my subscription to the Farmer and Planter for the current year.

Allow me, here, to express the hope, that it may long both be your pleasure and interest to continue and devote your time, talents and energies, through the medium of your most excellent periodical, to the cause of agriculture in South Carolina. It is the only agricultural paper published in South Carolina, that has shown signs of permanence, and I cannot think that it will be suffered to go down for want of patronage, (Present prospects are ominous of the fact, Doctor.—Ed.) however strangely, indifferent and lukewarm farmers are, at times, to their own true interests.

Please consider me a permanent subscriber to the Farmer and Planter, at least while you continue its destinies, and accept the assurance of the high respect of

A. C. F.

We might extract from several other letters, but must content ourself with these at the present.—Ed.

For the Farmer and Planter.

A Chapter on Fault Finders.

MR. EDITOR:—We have been very quietly enjoying the various charges made by divers correspondents of your paper, against the management of the late Fair—all the while expecting to be startled by some terrible disclosure that would blow up the Society, and transport the Executive Committee to parts unknown.—The “game” seems to have been about played out, and we propose reviewing our reviewers.

First and foremost, comes our “Pulcherrus,” the Editor of the Farmer and Planter, who complains at being assigned a post of honor, and condemns out and out our mode of appointing Committees. He suggests the appointment of Committees before the meeting and their publication. Now, would this secure a better attendance, or *attention*, if there. If gentlemen cannot be induced to take an interest when on the ground, could they be expected to do better by being appointed months in advance? Half of them would declare they had never heard of it, in all probability. The Committee have no means of ascertaining who will feel interested enough in the Fair to go there, but by *their* presence, and it would be a far more difficult matter to fill up blanks in Committees, than to make new Committees.

Again, the *chief* complaint—really the only charge worth consideration against the judge, is favoritism. A much wider field for complaint would be opened by following your suggestion, and it would be next to impossible, to avoid appointing gentlemen on Committees, who were exhibitors, or in some way interested, so as to leave room for grumbling. The Ex. Committee cannot be expected to know every body, and be familiar with every body's tastes, family quarrels or peculiarities. They endeavor to select good men and good judges of the department over which they are placed. They may make mistakes, but they make no appointments to play into the hands of any man or set of men. The Ex. Committee could be very much aided by members of the Society handing in the

names of individuals competent to fill any department.

In the report of the Committee on plowing match, a regular bill of indictment is filed against the Executive Committee for neglect of duty.

The exhibitors of the sewing machines, the model cottage, the force pump, alarm bells, &c.; musical instruments, (not entered on the books as South Carolina made) volcanic arms, &c., were all informed by the Secretary, that no premiums are offered for any of these articles; but the Society would be glad to have them exhibited, and Committees would draw attention to them. The parties replied that they expected no premiums, but only wished to exhibit by way of *advertisement*. One of the exhibitors obtained admission under a complimentary ticket, as a reporter for a paper we never heard of before or since—paid nothing for the entry of his articles, and made more complaint than any ten men at the Fair, about not getting a premium on everything he had. The bee hive received a silver medal at last years' exhibition, and was not entitled to one by the rules of the Fair.

Now, Mr. Editor, if under the head of “miscellaneous,” any articles of Southern manufacture of merit in any way connected with agriculture, had been recommended premiums, we are sure the Executive Committee would have taken great pleasure in endorsing your report. But in all candor, what propriety would there have been in awarding premiums to a Yankee patent pump or locomotive alarm bell, a Yankee patent sewing machine, a case of musical instruments or a New Haven, Conn., volcanic repeating firearm?

Next on docket, comes our unknown friend, Perkins, Jr., whom we will endeavor to dispose of satisfactorily, as he seems a sensible individual with somewhat of a proclivity to fault-finding, a “game,” however, which he considers legitimate.

There was not much difficulty in securing a premium for Mr. Stokes' binding. The Committee on South Carolina manufacture, other than domestic, thought it came very properly under their department, and asked if it would be proper to award it a premium, and were promptly told, certainly.

The Goat Skin Vest was legitimately entered under the head of “Fancy Miscellaneous,” and was entitled to a premium.” A plate was given, and no one but a crusty old bachelor would object to a discrimination always in favor of a woman's manufacture. Mr. Stokes' binding was entered under the miscellaneous head, and came very near being awarded premiums twice.

The “few well wrought axes” were overlooked by the Committee on Farm Implements (which had an arduous task), but the appropriate premiums were awarded by the Executive Committee. As to the beautiful turnips, there was no premium for specimens—but Rev. Jas. Boyce received a premium for the astonishing yield of 50,000 lbs. per acre. But how the sagacious Perkins, Jr., found out that the big squash and stringy carrots and parsnips, received premiums; we are unable to guess—un-

less from a fertile imagination, or looking through bad spectacles.

Now for the plowing match. The difference between Perkins, Jr., and the Committee, is this: The Committee, simple minded gentlemen, thought they were to judge by the plowing, of the merits of the various plows exhibited; while Perkins thinks that the plowing match was an exhibition every one had a right to enjoy according to his own fancy. We have nothing to say as to the Committee's awards. They labored faithfully and did their duty—it would have been very strange if they had pleased everybody. But Perkins, Jr., has guessed wide of the mark—no award was made for 300 lbs. cast iron in the shape of a plow.—Three of the premium plows we have seen tried fairly since, and consider the premiums well deserved.

As to trying the implements all on the ground. When exhibitors will enter their articles on Monday, and not keep the Committees busy making entries until Wednesday, things may be better managed; but it is wrong to expect a system of seven men, when seventy are doing all they can to create confusion.

Gentlemen send plows for exhibition—they profess to feel an interest in their success, but expect the Committee to see the plows taken to the field, provide the team, have the horses harnessed, the driver at his post, conduct the process, and of course award a premium. If the other objections of Perkins, Jr., are not more serious than the foregoing, we feel sure that the Society has not much to fear from an expose, and the rest of the Committees may survive his attacks.

Next, we have a quiet old gentleman, who is heated by the fire about the first Oct., first rubbing up his spectacles to show up the premium list. He quietly indulges in historical reminiscences, tells us John Randolph would step out of his way to kick a sheep, and the Jews hated hog meat, and then bringing that awful weapon, figures to bear upon it, blows the list to atoms.

He first discovers a "premium for the best wool, \$30," under the head of cotton bales; and then a premium of \$20 for the best Merino wool, and \$20 each, for the next best 5 classes; then \$20 each for best buck and ewes of each 6 classes. If I can figure, *two hundred and seventy dollars were offered for sheep.* Now, the old gentleman has used immensely magnifying glasses—he put on the wrong "specks," surely. There is no such thing in the list as a premium for Merino wool, or any but \$20 for the best bale, and \$10 for the second best bale of wool. Nor is this the only blunder. The whole premium under each class, is \$30—making for the six classes, \$180, to which add wool premium, \$30, and you have \$210, instead of \$270. Nor is this the only blunder. He puts down as the whole amount of hog premiums, \$60, when it is \$85—lard and ham added, \$79.50. Nor is this all. The Chinese Sugar Cane is put down for \$75, whereas, it is only \$65. The spectacles are wrong, for they make the mistakes always on their own side. We suggest to the Committee, the propriety hereafter

of offering a few mental arithmetics as premiums for fault-finders—they deserve encouragement for their industry.

Now, we take it that the object of the Society is to give encouragement to the introduction of every art and industrial pursuit that will add to the productive wealth of the country, and the happiness and independence of the people. The U. S. import more than ten million pounds of wool—they do not import, but export bacon. The South, with its peculiarly favorable climate, its poor and worn out lands, and its sparse population, is well adapted to wool growing, and ought to produce enough for home consumption; and above all, every man should have mutton enough for his own use, and wool enough to clothe his negroes. Woolen cloth can be economically made on the plantation, cotton cannot often.

Hog raising in a planting country, is a pretty hard business—manage the best you can, and your hogs will cost you nearly as much as to buy them; still we think it the true policy of the planter, to raise them if he can, "for the glorious privilege of being independent." The fact, that there were few hogs or sheep on exhibition, proves either that the premiums were too low to draw them out, or that the animals were not in the country.

The next man for our consideration, is our friend Sparrowgrass, who takes excellent care of himself, but could not let the opportunity slip, of taking a pop at the Executive Committee. He protests against their interfering with the reports of awarding Committees. "He thinks Mrs. Dr. Fair's quilt ought not to have received a premium at this Fair, because it received one at the last." Was he right? "Yes, he was right. And Mrs. Dr. Fair's quilt was not exhibited for a premium, nor did it receive one at this Fair. Is he satisfied? It was only exhibited as a beautiful work of art, to increase the interest of the exhibition. The suggestion of Sparrowgrass were to the point, but when it is remembered that the Executive Committee, after an adjournment of the Society, at 10 or 11, meet at their room, and work until 1 or 2 next morning, revising the reports of Committees, it is not quite as easy as talking, to have all right. Many things must escape their eye, and perhaps the greatest departure from the rules of the Society made at the late Fair, was by the very Committee to which Sparrowgrass belonged; and was overlooked by the Executive Committee, because they had every confidence in the scrupulousness of the gentlemen on that Committee.

The Committee on horses only followed the invariable practice at nearly all Fairs. They had no right to say a horse was not the best single harness horse, because he had proved himself one of the best double harnessed horses.—We can see no reason why a man cannot exhibit the product of the best five acres for one premium, and the product of the best one acre of the five for another premium. The premium is for the largest production on a given area.

The duties of the Examining Committees are arduous, and we believe they discharged them

Resting Land

honestly and conscientiously. It is vain to think of pleasing every body, and in fact, it is not desirable. There are a great many people whose happiness consists in grumbling, and they ought to be gratified; opposition, moreover, will do good by increasing the zeal of some, and opening the eyes of others.

ONE OF THE CLERKS IN THE OFFICE.

For the Farmer and Planter.
Weeds again.

MR. EDITOR:—The Farmers' Encyclopedia defines a weed "a plant out of place." Accordingly, any plant growing in a cultivated crop is a weed, and ought to be extirpated—elsewhere, it may be a fertilizer, and in that sense, not a weed. Just in this way in England, clover and other grasses are regarded. In our Southern country, besides having a peculiar institution, we have a peculiar soil and climate, peculiar staples; and must, therefore, have a peculiar course or rotation of crops. We cannot look to English husbandry or Chinese husbandry for examples for us; their management suits their peculiar condition, and their peculiar course of crops. In England and in the United States, North of 35°, clover and the grasses are sown with the small grain crops. Experience has shown that course will not answer generally in the cotton region; if it would, it would supply a desideratum—something to shade our lands through our hot, dry summers, and to replace the vegetable mould the cultivation of our peculiar crops so rapidly wastes. Surely it is not necessary in a country where the amount of vegetable mould is the test of fertility, to insist here upon its importance to the full productiveness of our soils. The only question is, the most practicable mode of applying it to our soils. For this purpose we strew our lots and stables with leaves, weeds and other vegetable matter—scrape the fence-corners and haul out rich mould from our ditch banks. This is all right and answers our purpose as far as it will go; but every one knows this cannot be applied to our whole farm. We need something else to supply the waste of mould, and to keep up the fertility of our cultivated fields. The English and the Northern States have found it in clover and the grasses—where shall we find it? This is a most important problem; if we do not solve it successfully, our country must grow waste. For want of it, millions of acres are already waste, and millions more are being annually added. This is a melancholy picture. Can nothing be done to stay the spread of this plague spot that is consuming our vitals? I turn away from it—I will not believe it. In the future, there will yet be found a remedy.

But if we have not yet found a substitute so potent as clover, we have nevertheless our resources—let us not under value them. They are our native crab-grass and the weeds—foremost among them, the rag-weed. Experience has taught me that with these much can be done. For a long time I have made it a rule not to pasture my stubble fields, except with hogs to pick up the scattered grain. I have en-

couraged the growth of, and even sown the rag-weed; and the year after the small grain, allow much of my land to rest. It is my practice, carefully, to turn under these weeds as early as I can in the fall; besides this, I manure from the stables, lots and with cotton seed, all that I can. The result, after 20 years' trial, is, that much of my land has improved—some of it is stationary, and some of it is deteriorated, mostly by being washed. As a whole, my farm is 20 per cent more productive. And, Mr. Editor, I see plainly if I had called in the aid of grade ditches and horizontal plowing at the beginning, as I have more lately, my success would have been greater. It may be objected that by thus seeding the land with weeds, the after culture in corn and cotton will be more difficult. I grant you that after crab-grass, the cultivation will be more difficult—not so with the rag-weed. When it is thick enough to smother the grass and other weeds, (as it will do in most cases) and is turned under in the fall, I have found it easily kept clean and loose. Perhaps the cotton and corn may not start off so well in the spring, but they will make amends in the summer and fall; and if manured with compost, they will start off well in the spring.

I write, Mr. Editor, for the practical farmer, such as I suppose are most of your readers. I have not attempted to go into the rationale of the course I recommend, nor to follow you and meet your several points. This has already been ably done by your sprightly and piquant correspondent, Broomsedge. I feel I could add but little to what he has said. After all, I am not without hope that this "weed" discussion may be productive of good.

In England they tend but few hoed crops, principally wheat, oats, rye and barley, generally followed by clover and the grasses. With these and the turnip crops fed off to sheep, the manure from their farm yards and the importation of thousands of tons of fertilizers from abroad, they have not only been able to maintain the fertility of their soils, but have doubled their product in the last fifty years. We, in South Carolina, live in a comparatively old country—compared with the new States; and it is time we looked to the preservation and amelioration of our soils. This is the only sure foundation of a prosperous agriculture. Without this, premiums for blooded or improved stock, trying prolific sorts of corn, cotton, &c., obtaining new plants from China and elsewhere, will be in vain. These cannot be made to reach a desired perfection, or be made profitable on a poor soil.

We have ample means for improving our soils, if we will but learn to avail ourselves of them—turning in vegetable matter, ("weeds") compost manure, cotton seed, drifted mould, in connection with a system of deep plowing, rest and a judicious course of rotation, grade ditching, and horizontal culture. With these and other means too tedious to name, there is not a shadow of doubt we can greatly improve our soils.

One word on another subject. I think your talented and learned correspondent, "Chinque-

pin Ridge," complains justly of rough usage in your columns. Surely farmers should be tender of each others feelings, and should meet in your columns as they do elsewhere, with that frank kindness which is generally their characteristic. If rudeness is permitted, I have no doubt many modest and estimable men will avoid appearing as contributors to your paper, and I am sure such is not your wish.

LAURENS.

The following communication, from Dr. Parker, should have appeared in our February No., and in advance of the reports alluded to; but it came to hand so late that it was crowded out of that No., in which the reports have appeared. We think it by no means unnecessary to publish it now, however, and would especially call the attention of friend "Rigmarole" to it —

ED. F. & P.

Those Reports.

MR. EDITOR:—Notwithstanding my time is fully occupied in duties and interests other than those of the farm, it would give me pleasure to reply fully to the indirect, but not less important, interrogatories of Rigmarole, were it not that I had at the proper time, furnished the Executive Committee of the Agricultural Society, a full report on the subjects of his enquiry. Those reports are now the property of the Society, and if thought worthy, will be published.

It is only necessary on this occasion, to say that the oat crop had not the benefit of irrigation, as intended. The true secret of success was in the quality of the land and its preparation. The land was made up of muck and drifted soil, which for years had been regarded as not only useless, but the source of much unhealthy miasma and consequent disease. After its being made thoroughly dry by under-drains, it was highly manured in 1856, and produced a heavy crop of corn (116 bushels on one acre). Last year (1857), it was plowed and subsoiled in January—in February the oats were planted (2 bushels per acre), plowed in with a narrow shovel, and rolled. As soon as the frosts were over, the ground was again rolled. On the 30th of June, the crop was harvested, and the yield, as reported by the Committee, was 89 bushels *clean* oats. Thorough drainage and deep plowing was effectual in preventing the injurious consequences of the extremes of wet and dry weather. Two crops in one year, as reported, proved the judicious expenditure of labor and manure.

Agreeing fully with Rigmarole, that the first and great object of our association is to disseminate such knowledge as will tend to advance the agricultural interests of our State, in the most practical manner. For the accomplishment of this end, the result of various efforts and experiments which have been, and are being tried, should be made public. From the reports of successful competitors for premiums, important facts will be derived, and which, of themselves, would make a good return for any investment which has been made in the State Agricultural Society, or subscription to the "Farmer and Planter;" while another class of reports, and from individuals

equally enterprising, though not so fortunate, should not be overlooked. They too, would serve to illuminate the pathway of the enquirer, and not unfrequently answer a good end, by preventing the expenditure of time and money upon articles and experiments which had proved to be but seeds of disappointment.

Respectfully, J. W. PARKER.
Columbia, Jan. 7th. 1853.

Ladies' Department.

For the Farmer and Planter.

Gardening and Orcharding.

NO. II.

MR. EDITOR:—In my first I thought proper to connect the above subjects, from the fact that I have superintended over both; and also because I deem it not out of the latitude of woman to interest herself upon these important matters. These well subjects seems to be with each other, and might well demand our attention. Man's mind is more directly engaged upon his fields of numberless acres; and we, with a little industry on our part, rendering our bodies as well as our minds more healthy, may contribute considerably in this *economical way* to the "savings at the threshold," and the "abundance of the harvest."

Anciently, horticulture comprised the garden and such fruit trees as belong to the modern orchard. "In the reign of Charles 1st., 1629, appeared Parkinson's great work, '*Paradisi in sole Paradisus terrestris*;' or a garden of all sorts of pleasant flowers, with a kitchen garden of all manner of herbs and roots, and an orchard of all sorts of fruit-bearing trees."—About the end of the 17th century, "John Evelyn, Esq., was the chief promoter of almost all horticultural improvements, forming an era in the history of British planting and improvement. Soon after returning from his travels in the Continent, he translated '*Le Jardinier Francois*,' instructing how to cultivate all sorts of fruit trees and herbs for the garden." King William and Queen Mary appointed Dr. Plukenet, a man distinguished for botanical knowledge, for their gardener. He afterwards published works entitled, "*A Practical Fruit Gardener*," and "*A Practical Kitchen Gardener*."

I do not wish to make a long dissertation upon botanical, ornamental or landscape gardening, or interest the reader with "trite remarks" on the antiquity of gardening, or a discussion concerning the groves of the Hesperides, the hanging terraces of Babylon, or other gardens of remote ages. I desire to discuss the private or useful garden; such as is well suited to our livelihood, our necessity and domestic economy.

The best situation for a garden, from learned authors, is one on decending ground, South or South West. one foot descent to thirty length. This gives to it all the advantages of the sun, which is very necessary to most of garden vegetables. The soil should consist of two varieties—a strong and a light one; or, in other words, a clayey loam and a sandy loam, as different plants require these respective kinds. Generally, a loam of middling quality;

but partaking more of the sandy than the clayey, is accounted the best. The soil should never be less than two feet and a half deep; the best gardeners prefer having it fully three feet. The natural soil, therefore, is hardly ever of sufficient depth. Care, then, should be taken in manuring, to keep up the proper loam. It is now an established fact in practical gardening, that for the greater number of culinary plants, and for all fruit trees and flowers, composts or compound manures are far preferable. A very able author recommends a compost made up in the following proportions: "Three parts light mould, one part rotten stable manure, one part coal ashes, and half part lime."

The location fixed upon, the next thing is enclosure. According to all authority upon this, walls are said to be the best. This, however, is not suitable for cottage or country gardening; the expense would be too much for every family. We shall have to continue in the practice of paling; but this should be well done; the upright pieces, instead of paling, should be morticed through the bars or cross pieces, leaving an aperture of not more than two or two and a half inches. If not closely paled, we might have to try the expedient of a neighbor woman, "set a black bottle in the middle to keep the rabbits out."

The division of the garden depends mostly upon taste—there is not much in its philosophy. Each one should have two large gravel walks, about seven feet in width, with a gradual rise in the centre; and as many small walks as necessity may require. These walks may have border-edgings of such shrubs and flowers as taste may suggest.

Of all classes of cultivated culinary vegetables, the cabbage tribe is the most ancient, as well as the most extensive. Of the common white cabbage, there are many subvarieties, some of which are preferable for a summer crop, others for an autumn crop, and a third set for winter supply. The Small, Early Dwarf, Large, Early Yorkshire, Early Dwarf Yorkshire, Early Battersea, and Early Sugar-loaf are best for summer use, and are ready from May to July; in some early situations, even in April. The imperial Large Sugar-loaf, Hollow Sugar-loaf, and Long Sided are excellent for autumn use, and tolerably good for the winter crop. Large Drum Head, the Scots and the American Cabbage, resist all the severity of the winter, and grow to a large size.

In sowing cabbage seed, a rich, light, open spot is selected; a covering of earth about a half-quarter or a quarter of an inch is sufficient for all the brassica tribe. The time of sowing for the early or summer crop, is the beginning of August the preceding year. The seeds of cabbages for autumn and winter use, are sown in the end of February or beginning of March. In June they are transplanted at the same distances as the early kinds.

The *Red Cabbage* is chiefly used for pickling; and the Dwarf Red variety certainly does make one of the most beautiful pickles that can be presented at the table. Of the *Savoy Cabbage*, which is distinguished by having wrinkled leaves, there are two principal sorts, the yel-

low and the green, the latter being esteemed the hardiest. Savoy is sown about the middle of April, and planted out in June. If they are wished for before winter, the seed is sown in February, or even in the preceding autumn, in which case, fine large plants well cabbaged, are ready for the table in the months of September and October. Savoy, far from being injured by moderate frost, are reckoned better when somewhat pinched by it.

As to the best variety of beans, I would suggest, the Mazagan, the Lisbon, the Cluster or Bush Bean; the Sandwich, the Broad Spanish, the French and Kidney Beans, both dwarfs and runners, and the Windsor Bean. The latter mentioned, is considered of all the large size, the best for table use. The Long-podded is also highly esteemed; it rises about three feet high, and is a great bearer, the pods being long and narrow, and closely filled with oblong middle sized seeds. It is now very much cultivated, and there are several subvarieties of it, as the Early, the Large and the Sword Longpod.

PEAS.—The early kinds are called *Hotspurs* and *Hastings*. They are generally sown in January and February. In March and April, full crops of late peas are sown. Some of the smaller kinds of the late pea, are the Blue Prussian, Dwarf Marrowfat and Spanish Dwarf.—These, if sown in ridges and the rows tolerably wide, succeed well without sticking. To these may be added, of the stick pea, the Tall Marrowfat, the Green Marrowfat, the Grey Vuncival and the Sugar Pea; while the Spanish Moratts and Imperial Pea, are also in good repute as hardy plants and abundant bearers.

The potatoe is of immense worth, and is known under the head of horticulture. "They are much used in Ireland and America as bread," says one author; another says, "The cultivation of potatoes in gardens in Scotland, was very little understood till about the year 1740, and was not practiced in fields till about twenty years after that period." The potatoe, according to Sir Joseph Banks, was first brought from South America to Spain, about the middle of the 16th century. This invaluable esculent root should have due consideration, both in our horticultural and agricultural societies.

Orcharding has been considered, till modern times, an appendage to the garden. Whether it need be in the same enclosure or not, is of no importance. When we speak of one, we also speak of the other. The fruits of the garden and the orchard are still, in many instances, the same. The orange, the grape, the plum, the cherry, the pomegranate, the strawberry, etc., are especially garden fruits, while apples and peaches have been cultivated independently. For convenience sake, as the one is much allied to the other, they ought to be in juxtaposition.

The soil of the orchard ought to be made of compost manure—very similar to the garden, though not so rich. The subsoil should be of a firm, clammy nature to prevent the blowing up of trees. It ought to have its plowing and turning of the soil regularly, for the neglected fruit tree, however good the land, will soon perish. More anon. Lucy.